SERVICE MANUAL

# PM553/PM453

85.

marantz®

## model PM553/PM453

## Stereo Amplifier

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## How to use this service manual

- The "Common parts" which Marantz Japan, Inc. has established are eliminated from this service manual.
- These "Common parts" are applied to all models in the service manuals arranged and issued by MJI.
- To indicate clearly the common parts in the schematic diagram, a line is drawn above or under the Ref. Desig. No. of applicable parts.
- "Common parts" can be supplied from the Marantz service center as ever.
  In case of ordering, please establish the parts number of 10 figures following the procedure mentioned in this service manual "How to establish the parts number for common parts".

**(NOTE)**

When you order parts to the Marantz parts center, please take notice of the following points.

1) Please correctly write the parts number of 10 figures following the rule.
2) Since ordering parts by the Ref. Desig. No. or ratings indicated in the schematic diagram does not satisfy the above conditions, the Marantz parts supply system does not work properly.
   As this case is apt to cause a trouble, please pay attention to it.

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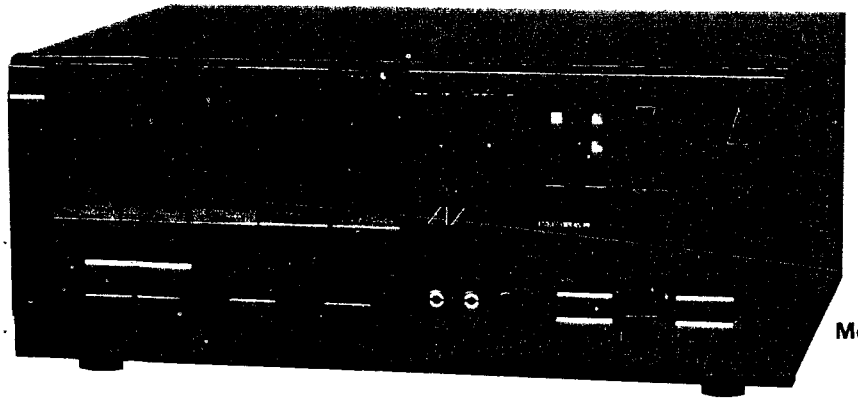
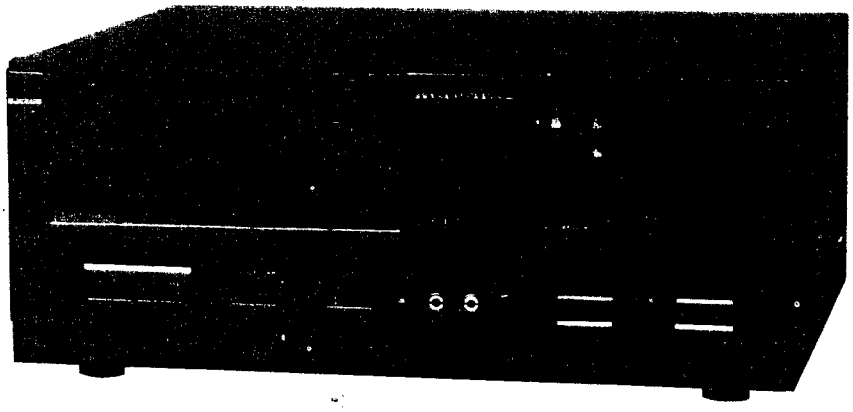
# MODEL PM453/PM553 STEREO AMPLIFIER



Model PM553



Model PM453

## INTRODUCTION

This service manual was prepared for use by Authorized Warranty Stations and contains service information for the Marantz Model PM453/PM553 Stereo Amplifier.

Servicing information and voltage data included in this manual are intended for use by knowledgeable and experienced personnel only. All instructions should be read carefully. No attempt should be made to proceed without a good understanding of circuitry operation.

The parts list furnishes complete ordering information. Most replacement parts should be ordered from the Marantz Company. However, a simple description is included for parts which can be obtained locally.

## 1. P.W. BOARDS

As can be seen from the circuit diagram the chassis of Model PM453/PM553 consists of the following units. Each unit mounted on a printed circuit board is discribed within the square enclosed by a bold dotted line on the circuit diagram.

1. **Voltage Amp . . . . . mounted on P.W. Board P700**
2. **Main Amp . . . . . mounted on P.W. Board P701**
3. **Headphon . . . . . mounted on P.W. Board P702**
4. **Speaker Terminal . . . mounted on P.W. Board P703**
5. **Power Supplu . . . . . mounted on P.W. Board P800**
6. **MIC Jack . . . . . mounted on P.W. Board PJ00**
7. **Video Selecter . . . . . mounted on P.W. Board PL00**
8. **Power Switch . . . . . mounted on P.W. Board PP00**
9. **Phono/Selecter/ Surround . . . . . mounted on P.W. Board PS00**
10. **Micon/Tone/ Mic Amp . . . . . mounted on P.W. Board PU00**
11. **Front AV Terminal . . mounted on P.W. Board PV00**
12. **Remote Easy VCR Terminal . . . . . mounted on P.W. Board PW00**



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## 2. TEST EQUIPMENT REQUIRED FOR SERVICING

This table lists the test equipment required for servicing the Model PM453/PM553 Stereo Amplifier.

| Item | Use |
|---|---|
| Distortion Analyzer | Distortion measurements |
| Audio Oscillator | Sinewave and squarewave signal source |
| AC VTVM | Voltage measurements (AC) |
| Oscilloscope | Waveform analysis and trouble shooting and ASO alignment |
| Circuit Tester | Trouble shooting |
| DC VTVM | Voltage measurements (DC) |
| AC Wattmeter | Monitors primary power to amplifier |
| Line Voltmeter | Monitors potential of primary power to amplifier |
| Variable Autotransformer (0 ~ 140V AC, 10A) | Adjust level of primery power to amplifier |
| Shorting Plug | Shorts amplifier input to eliminate noise pickup |

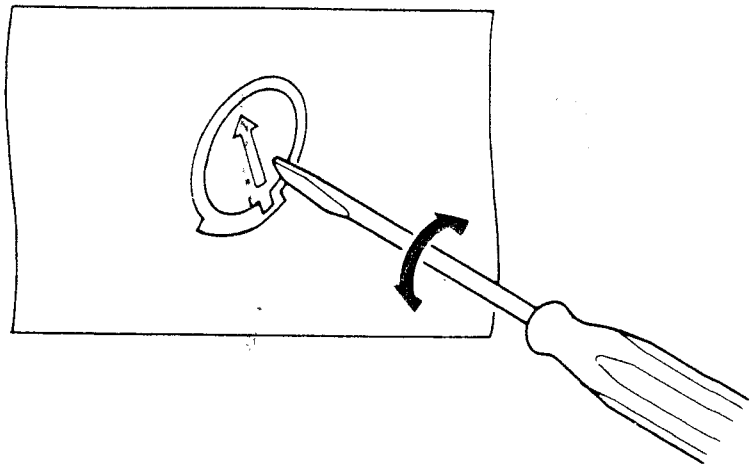
## 3. VOLTAGE CONVERSION

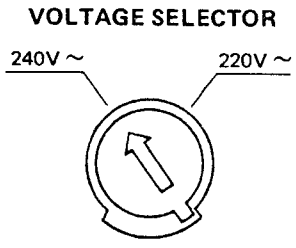
To convert the unit to a different power source voltage, change the position as illustrated in the drawing below.

CAUTION: DISCONNECT POWER SUPPLY CORD FROM AC OUTLET BEFORE CONVERTING VOLTAGE. DO NOT DISASSEMBLE THE VOLTAGE SELECTOR ABSOLUTELY.

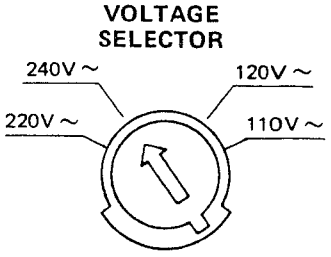
**Note on safety:**

Symbol ⚠ Fire or electrical shock hazard. Only original parts should be used to replace any part marked with symbol ⚠. Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.






(N, A) Version




(E) Version



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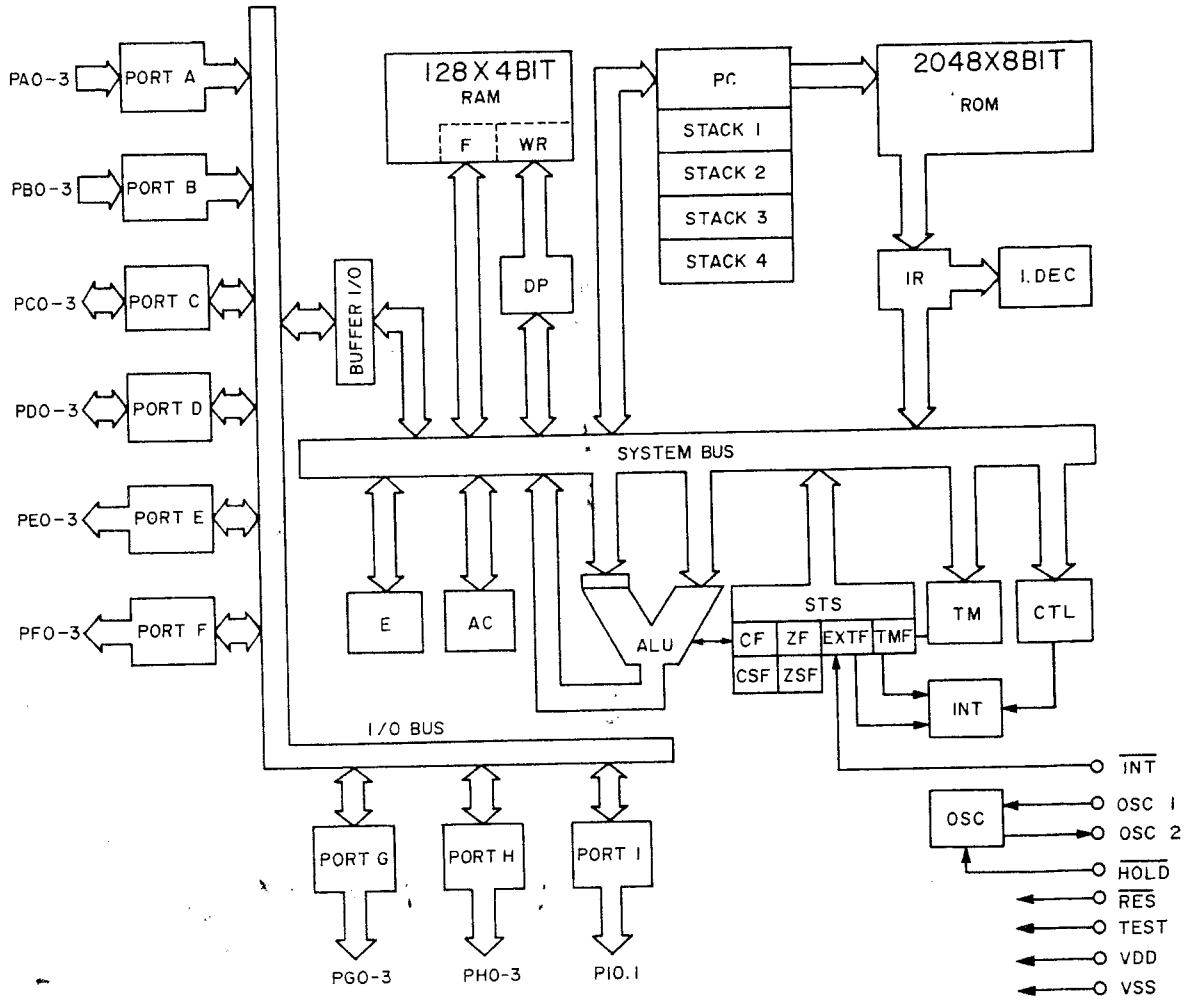
## 4. CIRCUIT DESCRIPTION

### SINGLE-CHIP 4-BIT MICROCOMPUTER LC6502C (QU01)

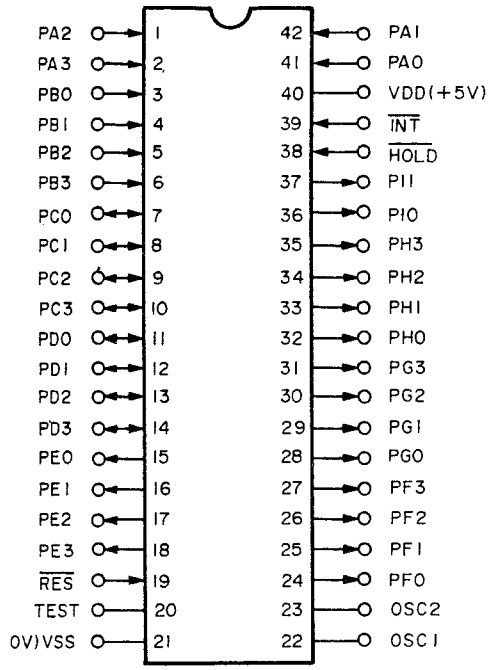
**BLOCK DIAGRAM**




| | |
|---|---|
| RAM: | data memory |
| F: | flag |
| WR: | working register |
| AC: | accumulator |
| ALU: | logical operator unit |
| DP: | data pointer |
| E: | E register |
| CTL: | control register |
| OSC: | oscillator circuit |
| TM: | timer |
| STS: | status register |

| | |
|---|---|
| ROM: | program memory |
| PC: | program counter |
| INT: | interrupt control |
| IR: | instruction register |
| I. DEC: | instruction decoder |
| CF, CSF: | carry flag, carry save flag |
| ZF, ZSF: | zero flag, zero save flag |
| EXTF: | external interrupt request flag |
| TMF. | internal interrupt request flag |

## Terminal Connections




## Terminal Function

| Terminal Name | I/O | Function |
|---|---|---|
| $\overline{INT}$ | Input | Pseudo interrupt request input terminal. |
| $\overline{HOLD}$ | Input | Hold mode request input terminal. |
| $\overline{RES}$ | Input | Reset input terminal. |
| $PA_{3-0}$ | Input | Input ports $A_3$ to $A_0$<br>In input mode, 4-bit input and bit test are allowed.<br>Used for HALT mode release and request input. |
| $PB_{3-0}$ | Input | Input ports $B_3$ to $B_0$<br>In input mode, 4-bit input and bit test are allowed. |
| $PC_{3-0}$ | I/O | I/O ports $C_3$ to $C_0$<br>In input mode, 4-bit input and bit test are allowed.<br>In output mode, 4-bit output, bit set/reset output are allowed. |
| $PD_{3-0}$ | I/O | I/O ports $D_3$ to $D_0$<br>In input mode, 4-bit input and bit test are allowed.<br>In output mode, 4-bit output, bit set/reset output are allowed. |
| $PE_{3-0}$ | Output | Output ports $E_3$ to $E_0$<br>4-bit output and bit set/reset are allowed.<br>Input of output latch contents in 4-bit units and testing of output latch of bit is possible. |
| $PF_{3-0}$ | Output | Output ports $F_3$ to $F_0$<br>4-bit output and bit set/reset are allowed.<br>Input of output latch contents in 4-bit units and testing of output latch of bit is possible. |
| $PG_{3-0}$ | Output | Output port $G_3$ to $G_0$<br>4-bit output and bit set/reset are allowed.<br>Input of output latch contents in 4-bit units and testing of output latch of bit is possible. |
| $PH_{3-0}$ | Output | Output ports $H_3$ to $H_0$<br>4-bit output and bit set/reset are allowed.<br>Input of output latch contents in 4-bit units and testing of output latch of bit is possible. |
| $PI_{0,1}$ | Output | Output ports $I_{0,1}$<br>2-bit output and bit set/reset are allowed.<br>Input of output latch contents in 4-bit units and testing of output latch of bit is possible. |
| OSC1 | Input | Terminal operated with clock signal externally supplied.<br>A ceramic resonatoe and CR are connected to the space between the X'tal and this terminals when using the local clock signal oscillator. |
| OSC2 | I/O | External terminal of the resonance circuit for local clock signal oscillation. |
| $V_{DD}$ | Input | Power terminal, usually connected to +5V. |
| $V_{SS}$ | | Connected to 0V of power supply. |
| TEST | Input | LSI test terminal, usually connected to $V_{SS}$ (0V). |



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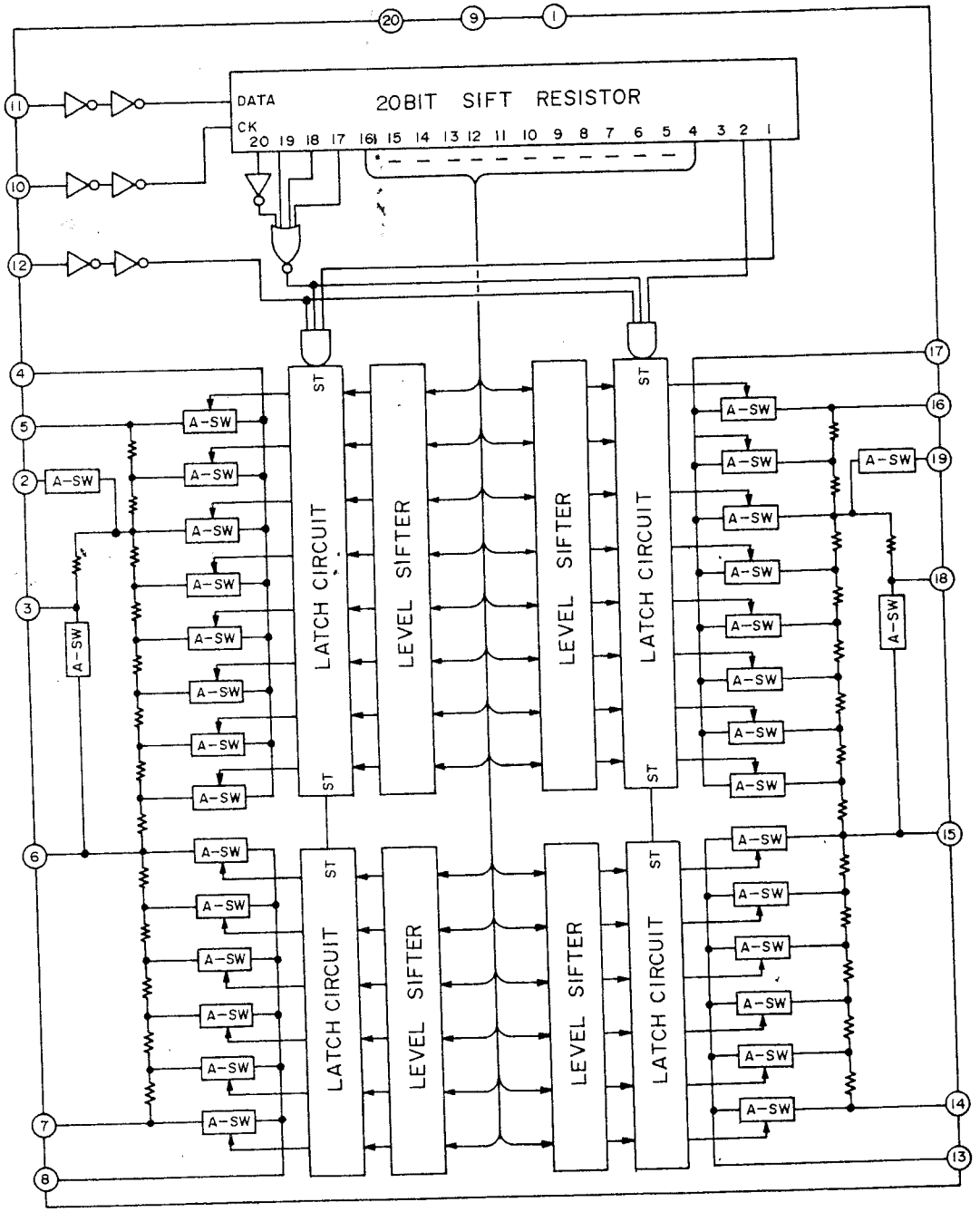
**Maximum Ratings** (Ta = 25°C, $V_{SS}$ = 0V)

| Item | Symbol | Condition | Min. | Max. | Unit |
|---|---|---|---|---|---|
| Maximum supply voltage | $V_{DD}$ max. | | −0.3 | +7 | V |
| Input voltage | $V_{IN}$ | | −0.3 | $V_{DD}$+0.3 | V |
| Output voltage | $V_{OUT}$ | Output transistor OFF | −0.3 | $V_{DD}$+0.3 | V |
| Allowable power dissipation | $P_d$ max. | −30°C to +70°C | | 350 | mW |
| Ambient operating temperature | $T_{opg}$ | | −30 | +70 | °C |
| Ambient storage temperature | $T_{stg}$ | | −55 | +125 | °C |

## ELECTRON VOLUME IC TC9177P (QS03)

### BLOCK DIAGRAM



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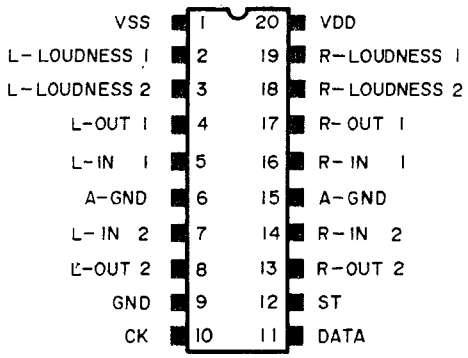
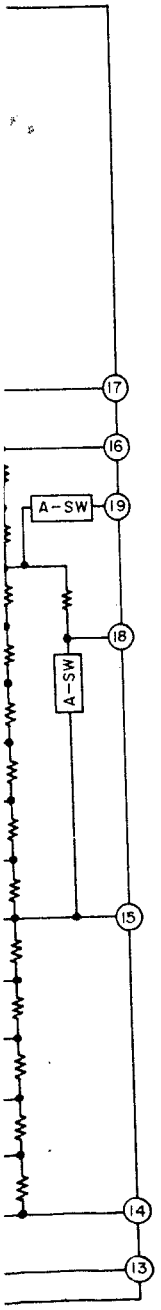
| Unit |
|---|
| V |
| V |
| V |
| mW |
| °C |
| °C |

## Terminal Connections




## Terminal Function

| Pin No. | Name | Function Description |
|---|---|---|
| 2, 3<br>18, 19 | L-LOUDNESS 1, 2<br>R-LOUDNESS 1, 2 | Pins for loudness<br>When loudness data is input, these pins becomes −20 dB dampened pins.<br>Loudness control is possible through the connection of high and low range boosting circuits to these pins. |
| 4, 17 | $L\text{-}OUT_1$<br>$R\text{-}OUT_1$ | 10 dB step attenuator output.<br>The signal applied to IN is attenuated in 8 10 dB steps from 0 to 70 dB. |
| 5, 16 | $L\text{-}IN_1$<br>$R\text{-}IN_1$ | 10 dB attenuator input. |
| 6, 15 | A-GND | AC ground pin. |
| 7, 14 | $L\text{-}IN_2$<br>$L\text{-}IN_2$ | 2 dB attenuator pin. |
| 8, 13 | $L\text{-}OUT_2$<br>$R\text{-}OUT_2$ | 2 dB attenuator output.<br>The signal applied to IN is attenuated in 5 2 dB steps from 0 to 8 dB. |
| 11 | DATA | Data input for amount of attenuation and channel selection.<br>Input by CK signal, configurated in 20 bits. |
| 10 | CK | Clock input.<br>Clock input for fetching data from DATA pin. |
| 12 | ST | Strobe input.<br>The data for the amount of attenuation and channel selection fetched from the DATA and CK pins is latched when this pin is "high".<br>The previous data remains effective when a high level is not applied to this pin. |
| 20 | $V_{DD}$ | Pin for (+) voltage. |
| 9 | GND | Ground pin. |
| 1 | $V_{SS}$ | Pin for (−) voltage. |

## Maximum Ratings (Ta = 25°C)

| Item | Symbol | Ratings | Unit |
|---|---|---|---|
| Supply voltage | $V_{DD}$ | $V_{SS}$−0.3 ~ $V_{SS}$+36 | V |
| Input voltage | $V_{IN}$ | $V_{SS}$−0.3 ~ $V_{DD}$+0.3 | V |
| Power dissipation | $P_D$ | 300 | mW |
| Operating temperature | $T_{opr}$ | −30 ~ 75 | °C |
| Storage temperature | $T_{stg}$ | −55 ~ 125 | °C |



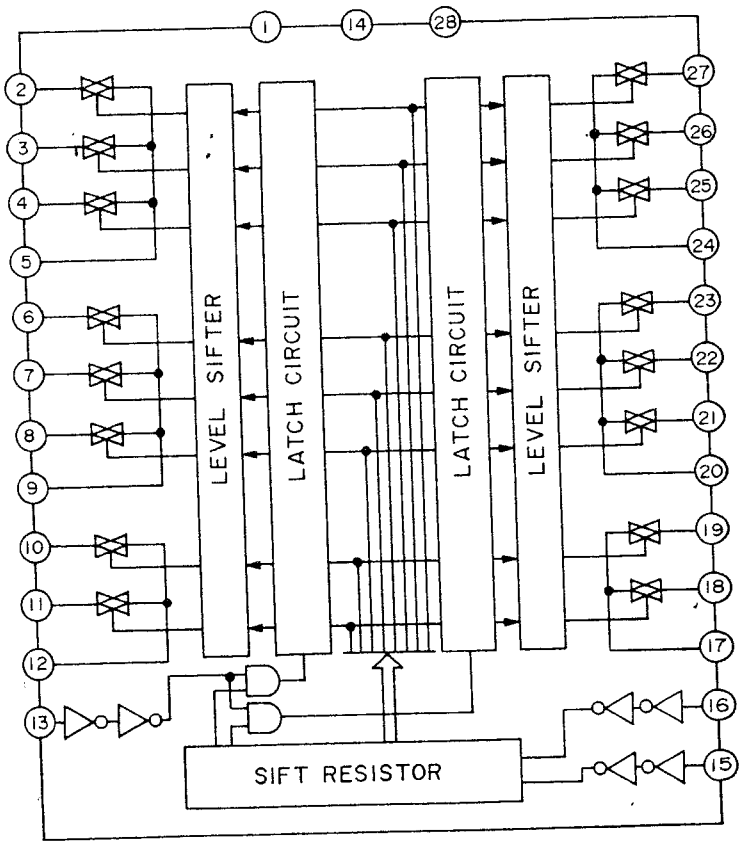
M5C

**Electrical Characteristics** ($V_{DD}$ = 15V, $V_{SS}$ = −15V Ta = 25°C)

| Item | | Symbol | Test Condition | | Min. | Typ. | Max. | Unit |
|---|---|---|---|---|---|---|---|---|
| Operating power voltage range | | $V_{DD}-V_{SS}$ | | | 7.5 | ~ | 32 | V |
| Operating supply current | | $I_{DD}$ | | | | 0.5 | 3.0 | mA |
| Input voltage | "H" | $V_{IH}$ | DATA, CK, ST terminal | | 4.0 | ~ | $V_{DD}$+0.3 | V |
| Input voltage | "L" | $V_{IL}$ | | | −0.3 | ~ | 1.0 | V |
| Total resistance value ($ATT_1$) | | $R_{ATT_1}$ | | | 90 | 120 | 160 | KΩ |
| Total resistance value ($ATT_2$) | | $R_{ATT_2}$ | | | 10 | 14. | 20 | KΩ |
| Step error ($ATT_1$) | | $STEP_{(1)}$ | $f_{in}$=DC~20 kHz $R_L$=∞ | 0 ~ 30 dB | 9.2 | 10 | 10.8 | dB |
| | | | | −40 ~ 70 dB | 8.8 | | 11.8 | |
| Step error ($ATT_2$) | | $STEP_{(2)}$ | $f_{in}$=DC~20 kHz $R_L$=∞ | | −1.2 | 2 | 2.8 | dB |
| Total harmonic distortion ($ATT_1$) | | $THD_{(1)}$ | $f_{in}$=20~20 kHz, $V_{in}$=1.0Vrms 0 dB | | | 0.003 | 0.005 | % |
| Total harmonic distortion ($ATT_2$) | | $THD_{(2)}$ | $f_{in}$=20~20 kHz, $V_{in}$=1.0Vrms 0 dB | | | 0.003 | 0.005 | % |
| Maximum amount of attenuation | | $ATT_{(max.)}$ | | | 90 | | | dB |
| Output noise voltage | | $V_N$ | 0 dB Position $f_{out}$=20~20 kHz $R_g$=1KΩ | | | 2 | 10 | μVrms |
| Channel separation | | C.S | $V_{in}$=1 Vrms $f_{in}$=1 kHz | | 80 | | | dB |
| **CONTROL INPUT SECTION** | | | | | | | | |
| Maximum operating frequency | | $f_{(max)}$ | | | | | 500 | kHz |
| Minimum clock width ("H") | | $T_{CK(H)}$ | | | 1.0 | | | μsec |
| Minimum clock width ("L") | | $T_{CK(L)}$ | | | 1.0 | | | μsec |

## HIGH VOLTAGE RESISTING ANALOG FUNCTION SWITCH ARRAY TC9163N (QS01)

### BLOCK DIAGRAM



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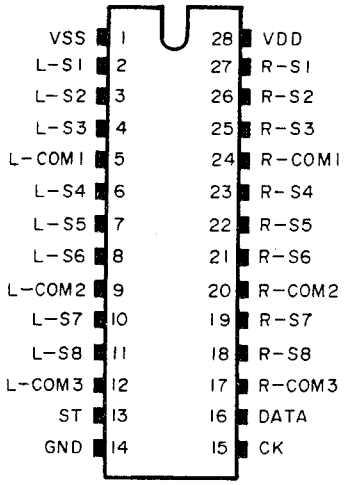
| lax. | Unit |
|---|---|
| 32 | V |
| 3.0 | mA |
| D+0.3 | V |
| 1.0 | V |
| 160 | KΩ |
| 20 | KΩ |
| 0.8 | dB |
| 1.8 | |
| 2.8 | dB |
| .005 | % |
| .005 | % |
| | dB |
| 10 | μVrms |
| | dB |
| | |
| 500 | kHz |
| | μsec |
| | μsec |

01)

7
6
5
24
23
22
21
20
19
18
17
16
15

**Terminal Connections**




**Maximum Ratings**

| Item | Symbol | Ratings | Unit |
|---|---|---|---|
| Supply voltage (1) | $V_{DD}$ $V_{SS}$ | 34 | V |
| Supply voltage (2) | $V_{DD}$ GND | 17 | V |
| Input voltage | $V_{IN}$ | $V_{SS}-0.3 \sim V_{DD}+0.3$ | V |
| Power dissipation | $P_D$ | 300 | mW |
| Operating temperature | $T_{opr}$ | −30 ~ 75 | °C |
| Storage temperature | $T_{stg}$ | −55 ~ 125 | °C |

**Electrical Characteristics** ($V_{DD}$=16V, $V_{SS}$=−16V, GND=0V, Ta=25°C)

| Item | Symbol | Test Condition | Min. | Typ. | Max. | Unit |
|---|---|---|---|---|---|---|
| Operating supply voltage (1) | $V_{DD}-GND$ | | 8 | ~ | 16 | V |
| Operating supply voltage (2) | $GND-V_{SS}$ | | −8 | ~ | −16 | V |
| Operation supply current | $I_{DD}$ | $V_{DD}$=16V, $V_{SS}$=−16V, GND=0V | – | ~ | 3 | mA |
| Backup voltage | $V_B$ | | 4 | ~ | 16 | V |
| Backup current | $I_B$ | $V_{DD}$=4.0V, $V_{SS}$=GND=0V | – | 1 | 10 | μA |
| High level input voltage | $V_{IH}$ | $V_{DD}$=16V, CK, DATA, ST | 4 | – | 16 | V |
| Low level voltage | $V_{IL}$ | $V_{DD}$=16V, CK, DATA, ST | 0 | – | 10 | V |
| Operating minimum pulse width | $t_{in}$ | | 5 | – | – | μsec |
| Switch ON resist. | $R_{ON}$ | | – | 100 | 200 | Ω |
| Total harmonic distortion. | THD | $f_{in}$=0~20 kHz, $V_{in}$=1Vrms | – | 0.002 | 0.005 | % |
| Nois voltage. | $V_{NO}$ | f=20~50 kHz | – | 2 | 10 | μVrms |



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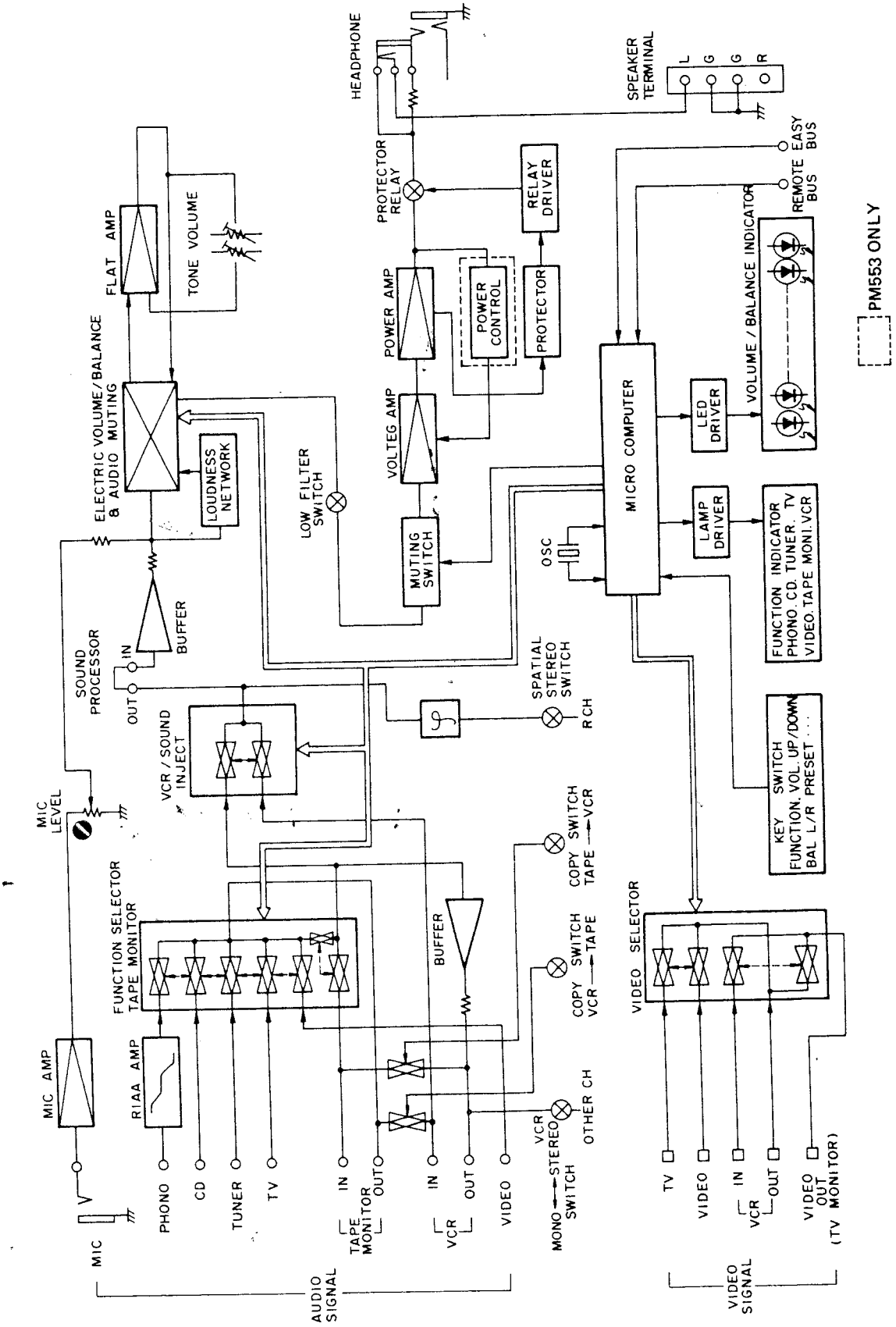
## 5. BLOCK DIAGRAM



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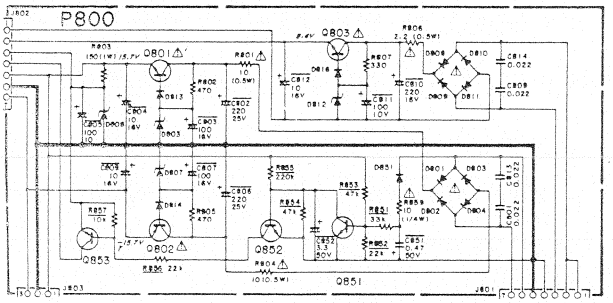
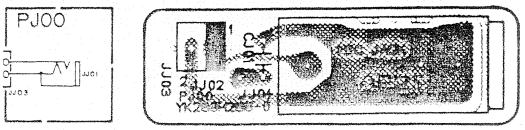
# 6. DIAGRAM AND COMPONENT LOCATIONS

## 6.1 Power Supply Assembly (P800)
### Schematic Diagram and Component Locations




## 6.2 Mic Jack Assembly (PJ00)
### Schematic Diagram and Component Locations

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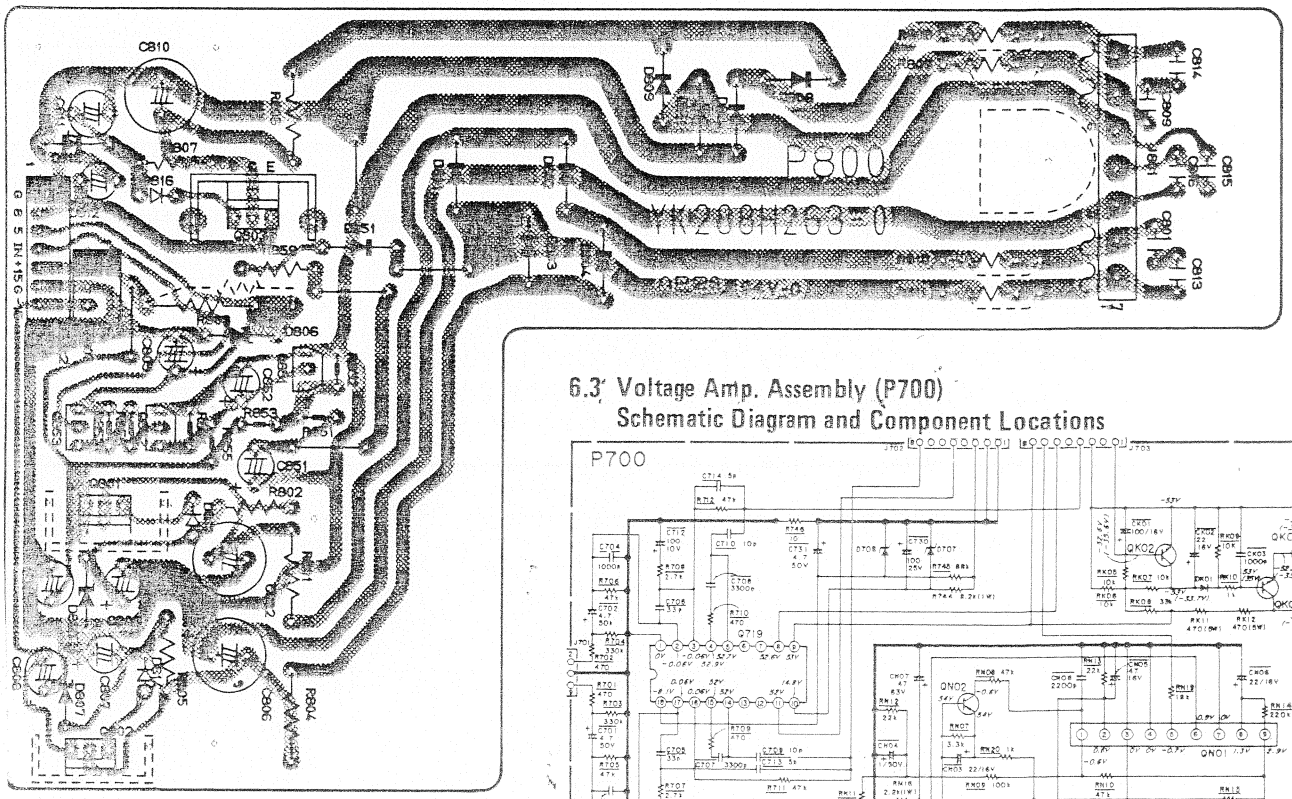
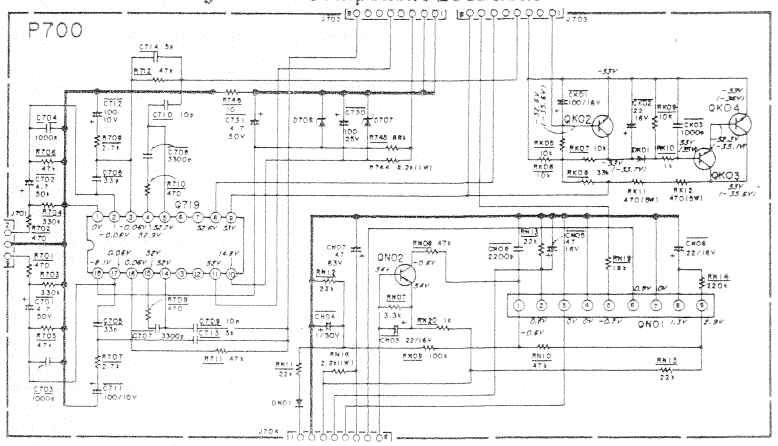
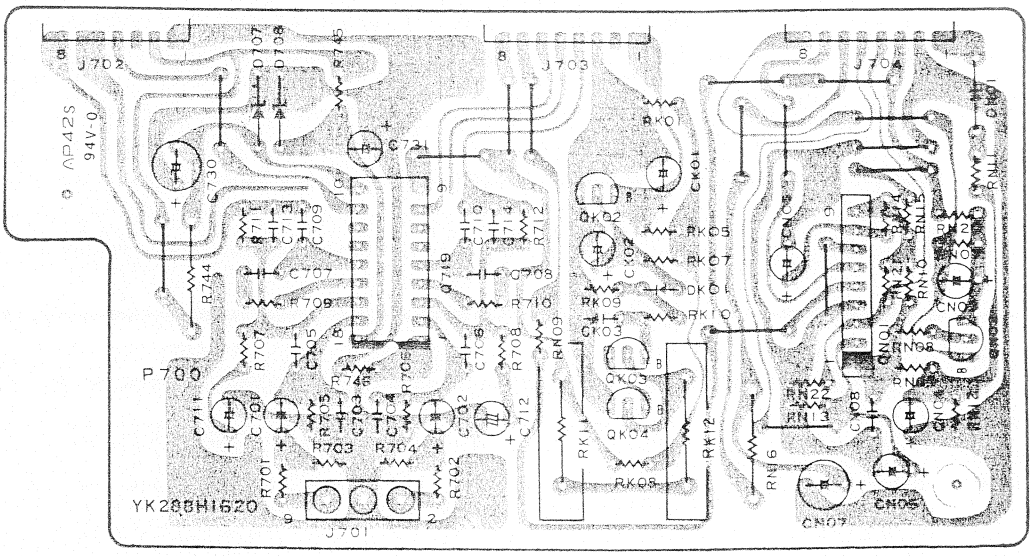



## 6.3 Voltage Amp. Assembly (P700)
### Schematic Diagram and Component Locations




OUT (TV MONITOR)



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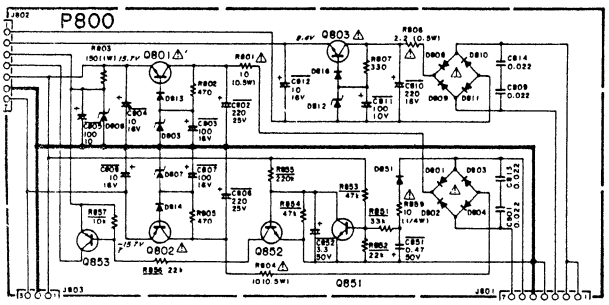
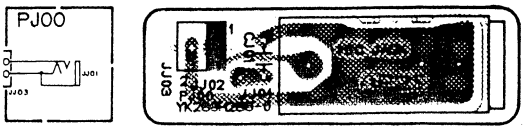
# 6. DIAGRAM AND COMPONENT LOCATIONS

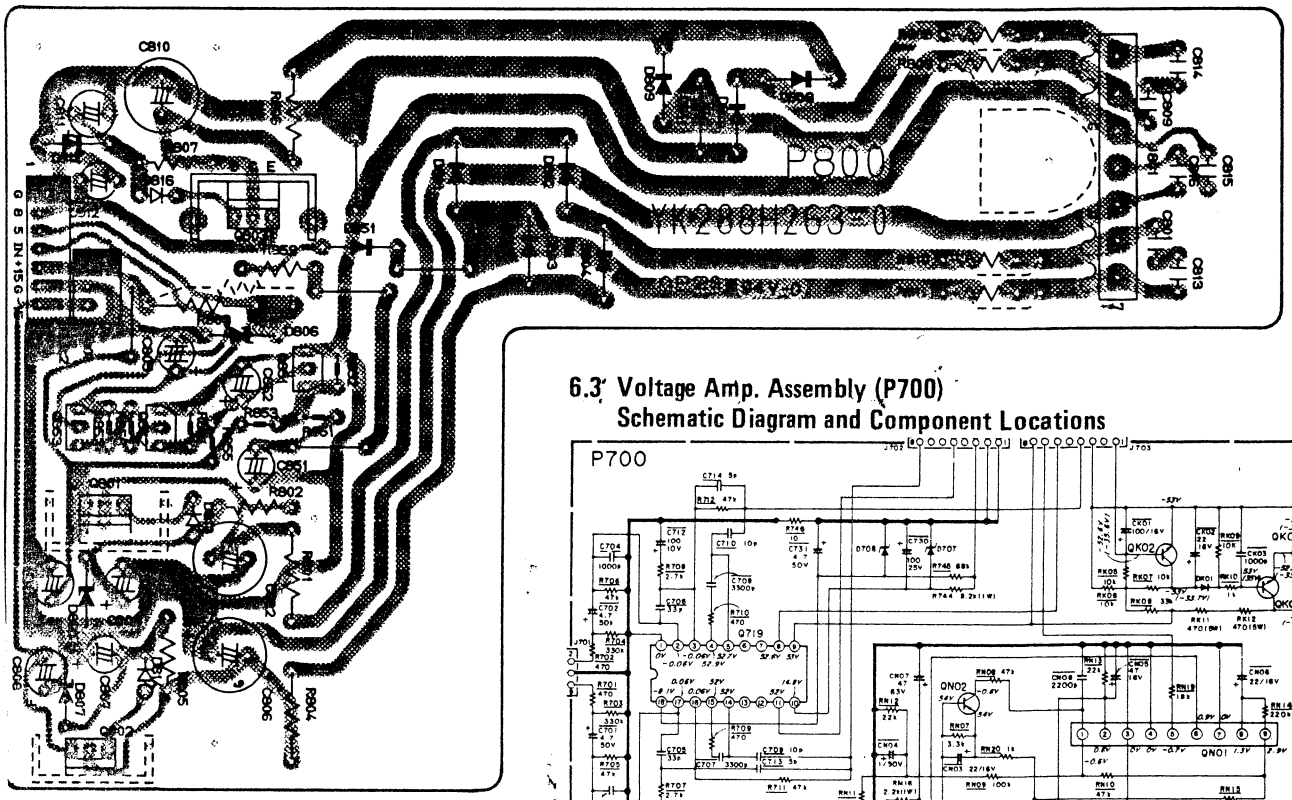
## 6.1 Power Supply Assembly (P800)
### Schematic Diagram and Component Locations



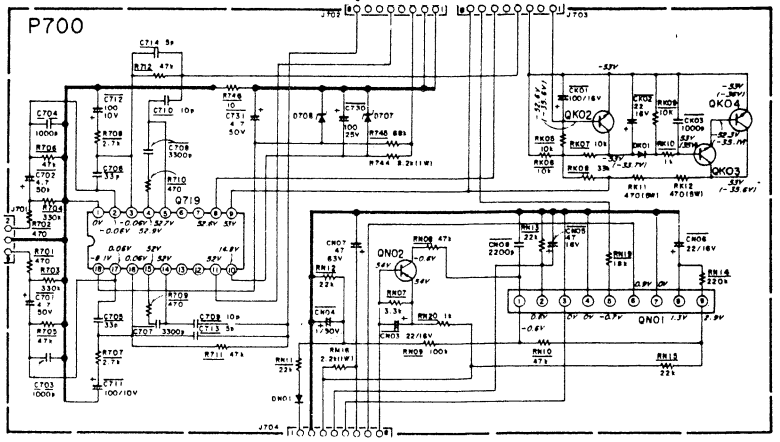

## 6.2 Mic Jack Assembly (PJ00)
### Schematic Diagram and Component Locations

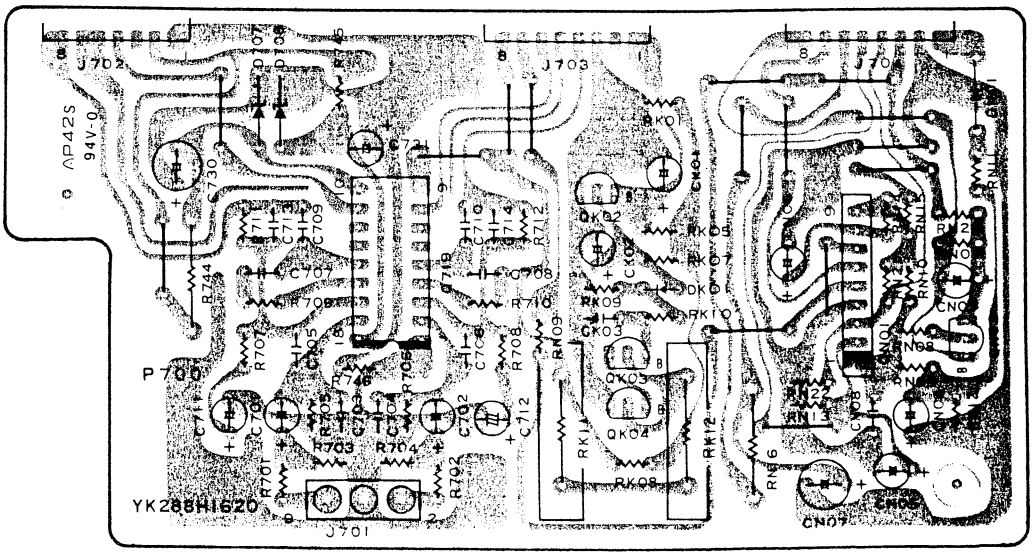



PM553 ONLY




## 6.3 Voltage Amp. Assembly (P700)
### Schematic Diagram and Component Locations




(TV MONITOR) OUT



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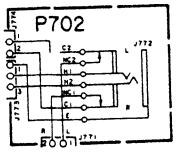
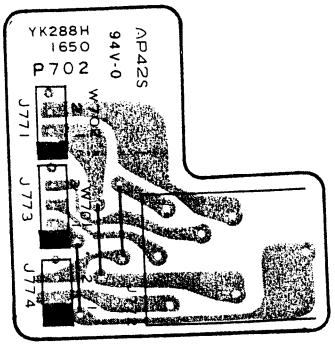
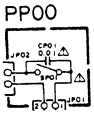
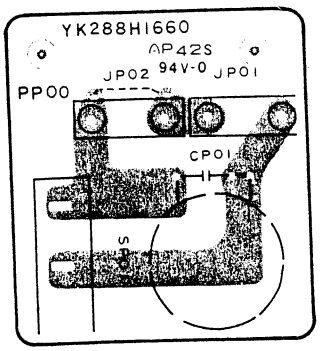
## 6.4 Headphone Assembly (P702) Schematic Diagram and Component Locations



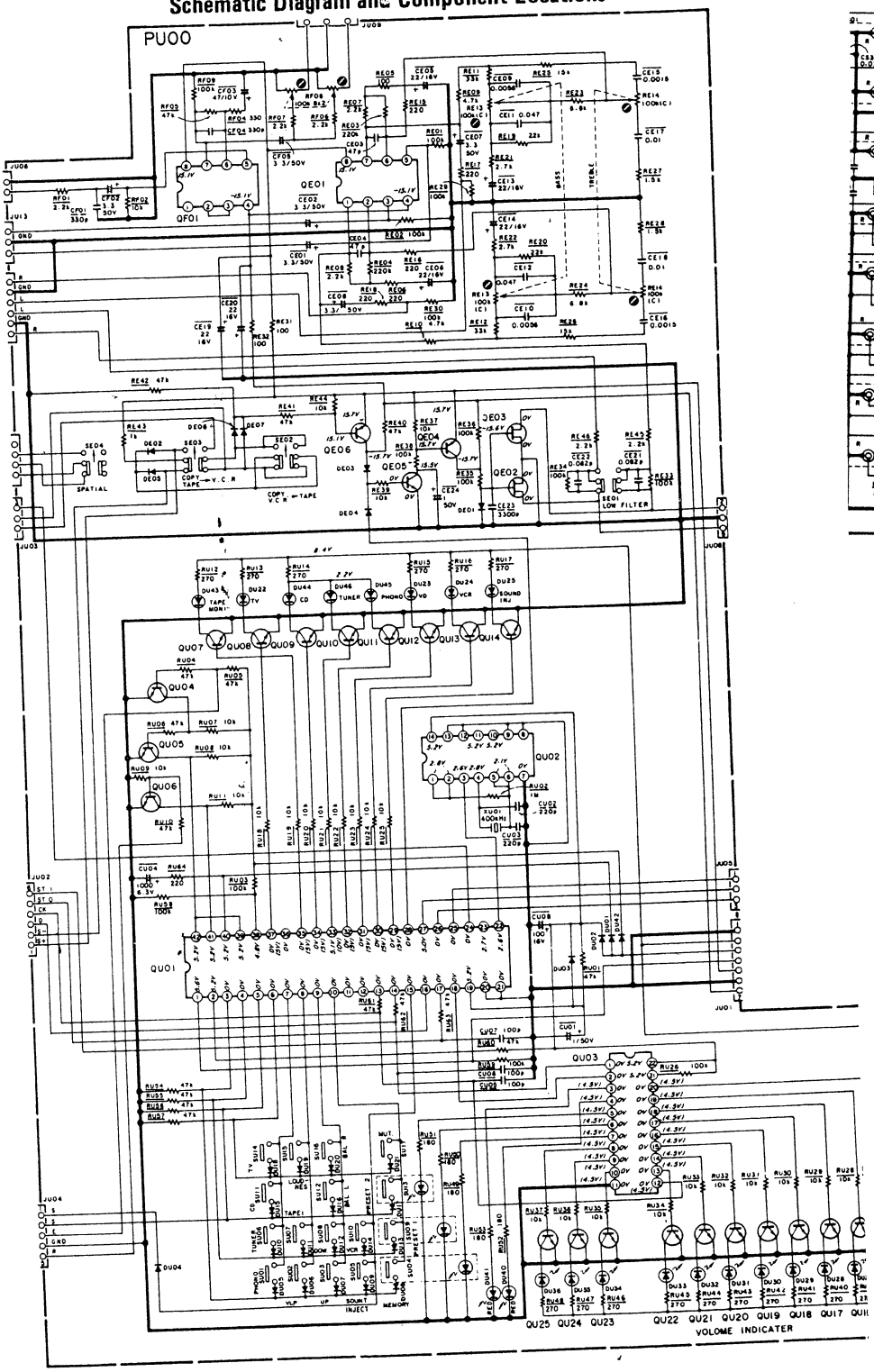



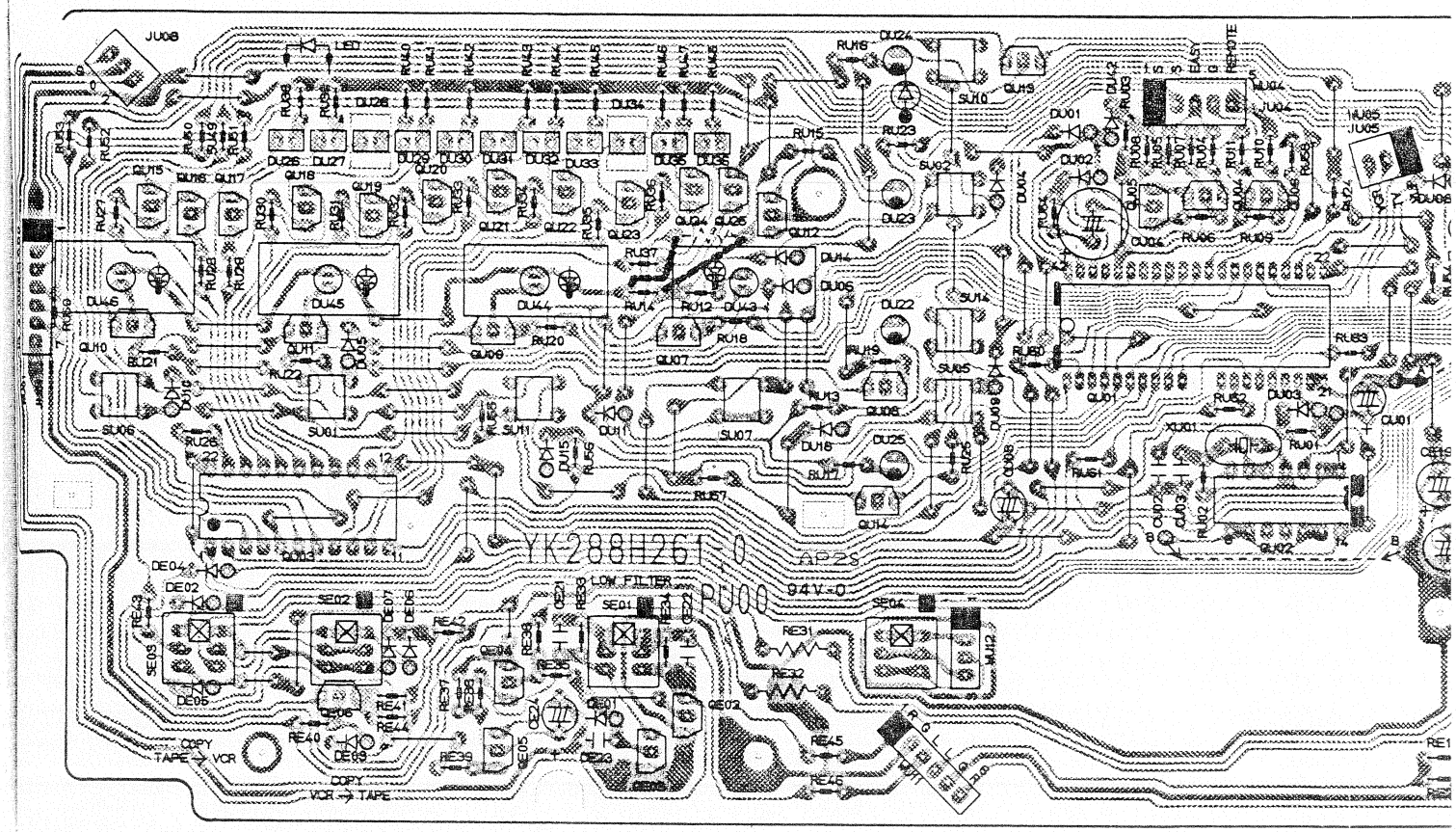

## 6.5 Power Switch Assembly (PP00) Schematic Diagram and Component Locations



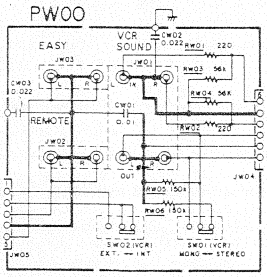



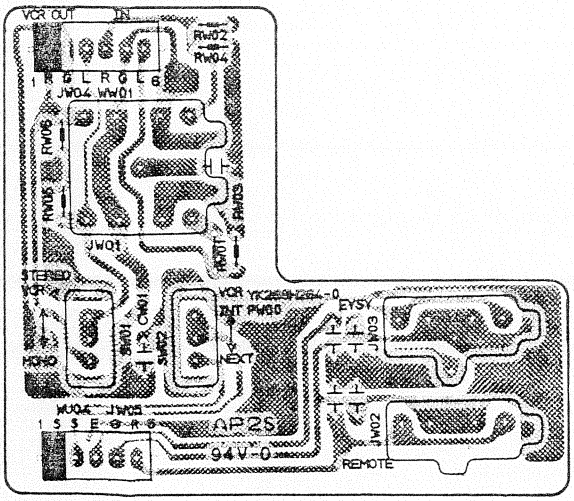

## 6.6 Micon/Tone/Mic Amp. Assembly (PU00) Schematic Diagram and Component Locations



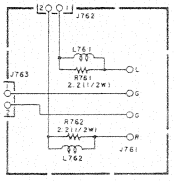


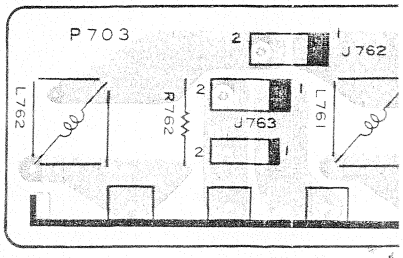

## 6.7 Remote Easy VCR Terminal Assembly (PW00) Schematic Diagram and Component Locations



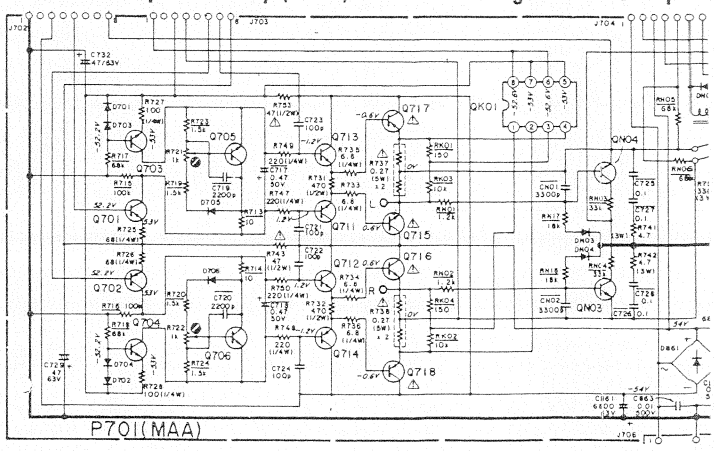



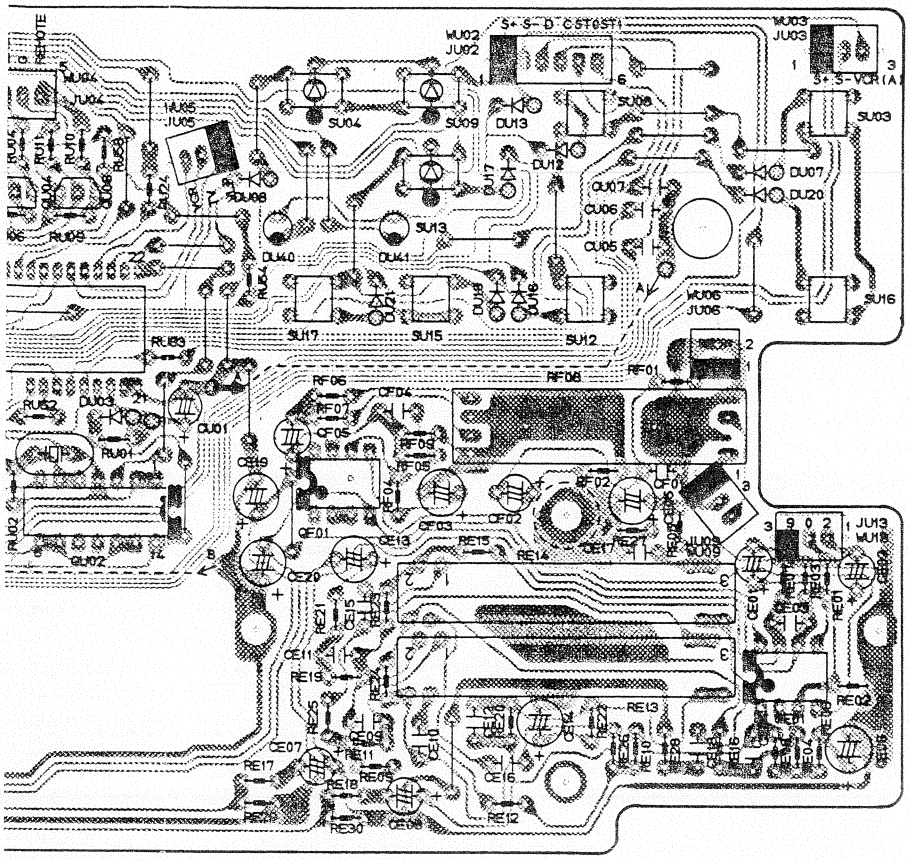

## 6.8 Speaker Terminal Assembly (P703) Schematic Diag

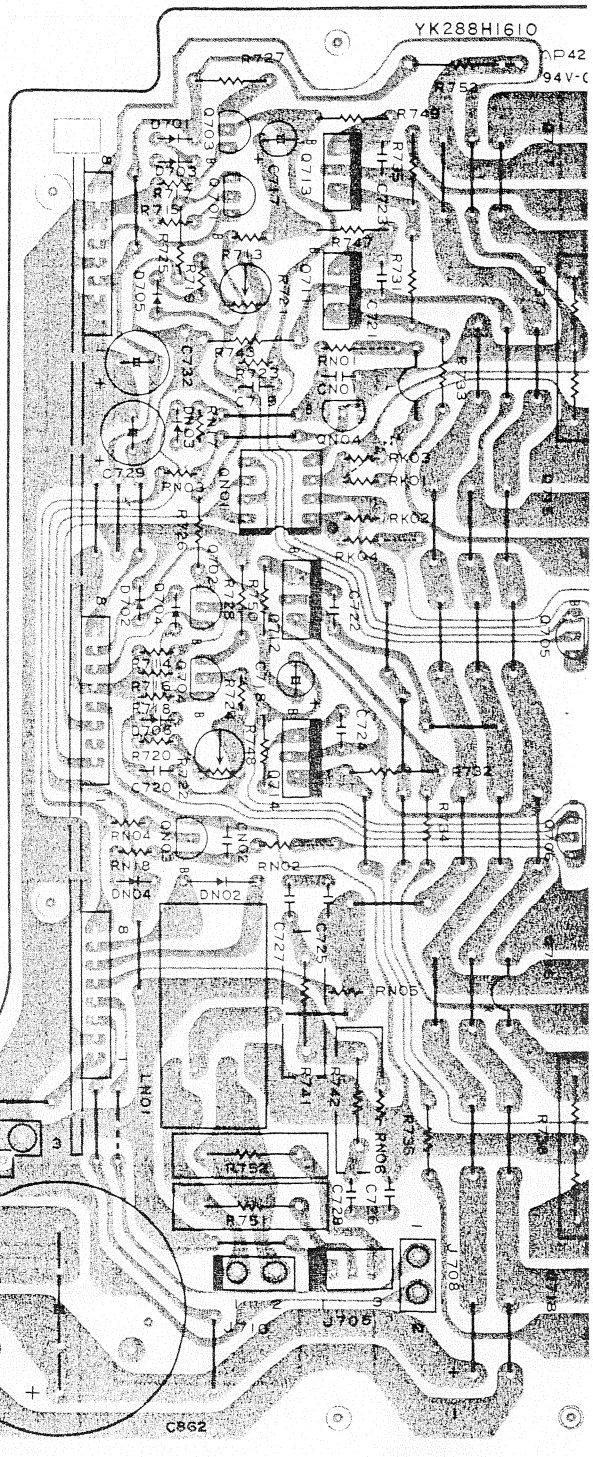


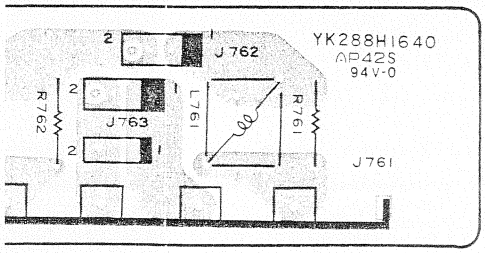

## 6.9 Main Amp. Assembly (P701) Schematic Diagram and Compon



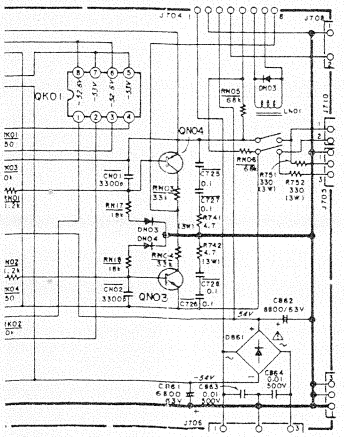





ly (P703) Schematic Diagram and Component Locations




ıtic Diagram and Component Locations





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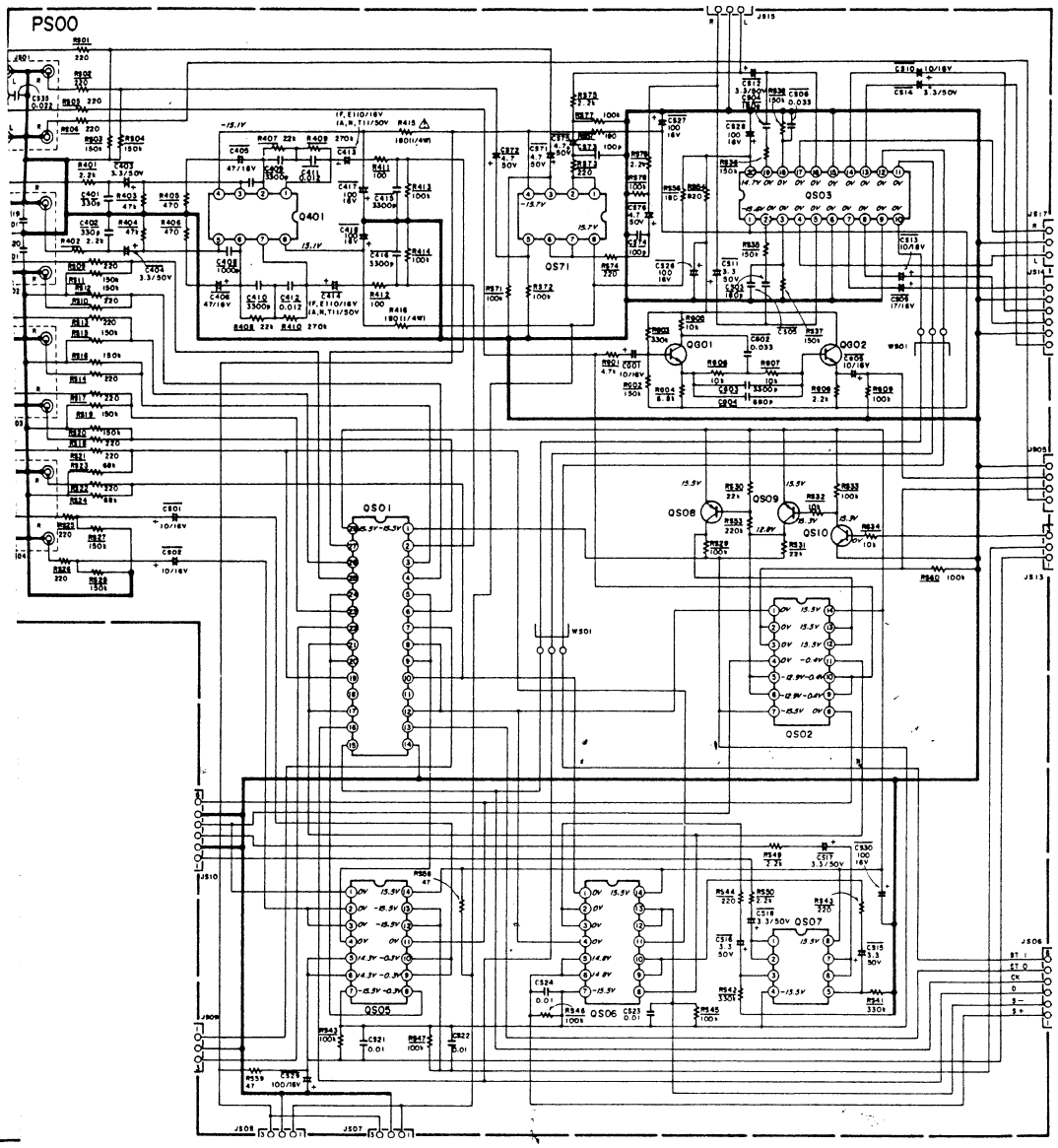
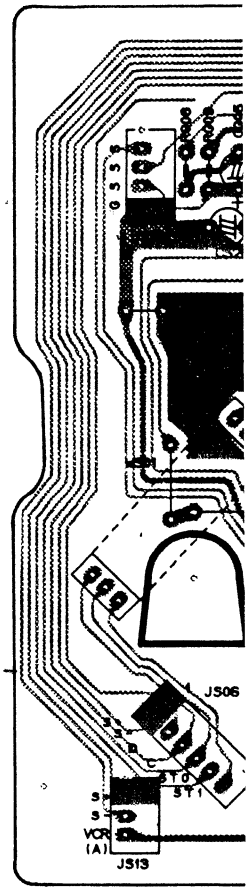
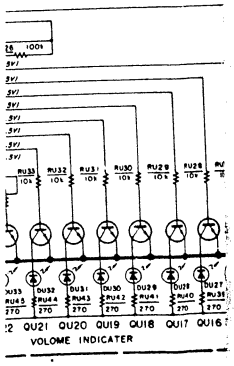
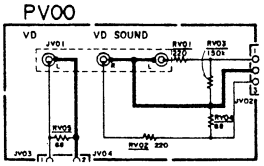
## 6.10 Phono/Selecter/Surround Assembly (PS00) Schematic Diagram and Component Locations

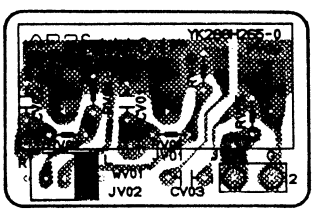


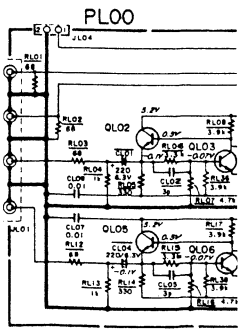



## 6.11 Front AV Terminal Assembly (PV00) Schematic Diagram and Component Locations




## 6.12 Video Selecter Schematic Diag



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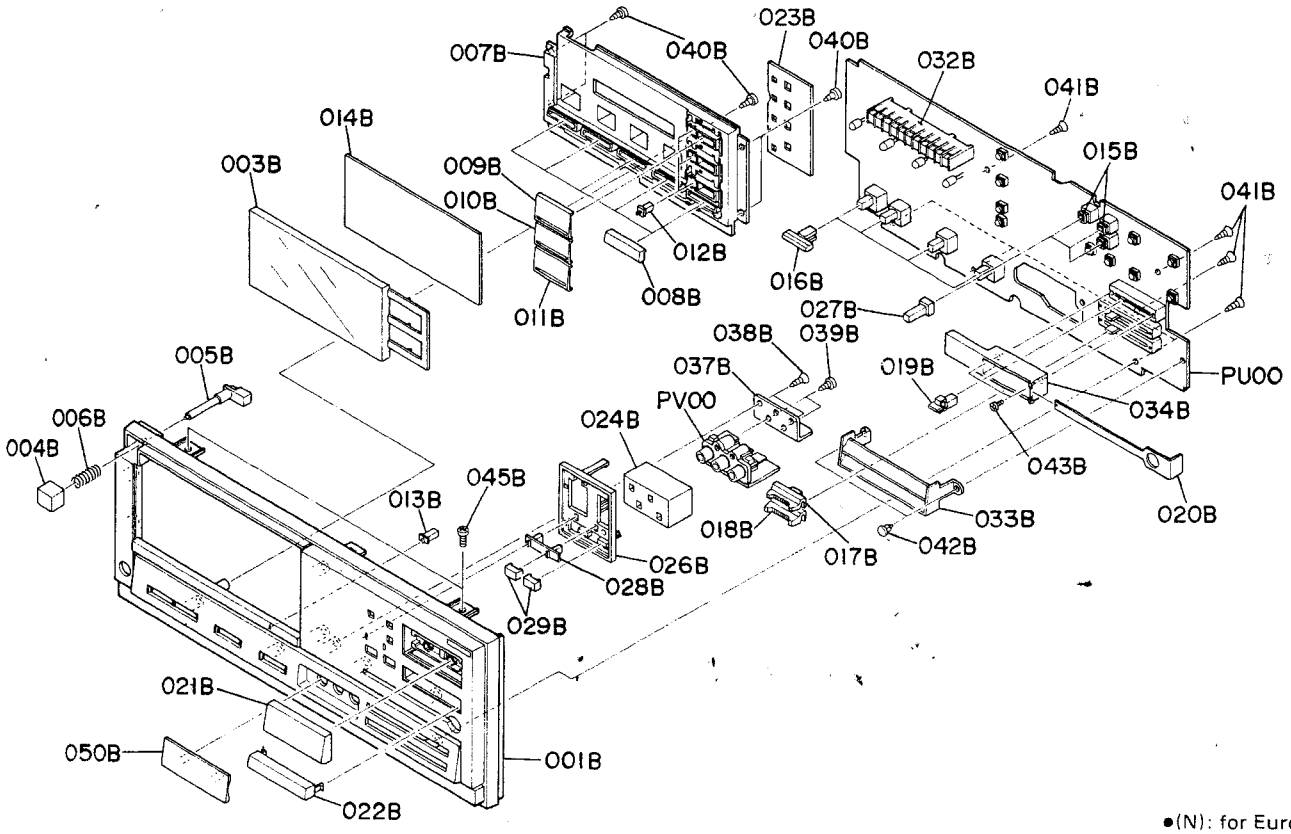
## 7. EXPLODED VIEW AND PARTS LIST

### [C01-99] FRONT PANEL




- (N): for Europe
- (E): for Europe
- (A): for Austral
- (F): for Japan

| REF. DESIG. | PART NO. | DESCRIPTION |
|---|---|---|
| A | 288H248400 | Front Panel Assembly (PM553) |
| 001B | 288H248010 | Front Panel |
| 013B | 288H355030 | Lens, Sound Eject |
| 026B | 288H271010 | Holder |
| 028B | 288H355020 | Lens, Muting/Loudness |
| 029B | 289H270110 | Button, Muting/Loudness |
| A | 287H248400 | Front Panel Assembly (PM453) |
| 001B | 287H248010 | Front Panel |
| 013B | 288H355030 | Lens, Sound Eject |
| 026B | 288H271010 | Holder |
| 028B | 288H355020 | Lens, Muting/Loudness |
| 029B | 289H270110 | Button, Muting/Loudness |
| 003B | 288H158010 | Window, Front |
| 004B | 139T154360 | Knob, Power Switch |
| 005B | 012H121010 | Link, Power Switch |
| 006B | 139T115020 | Spring, Power Switch |
| 007B | 288H271030 | Holder, Selector |
| 008B | 288H270040 | Button, Input Selector |
| 009B | 288H270010 | Button, VCR/MON |
| 010B | 288H270020 | Button, Video |
| 011B | 288H270030 | Button, TV |
| 012B | 288H355040 | Lens |

| REF. DESIG. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| 014B | 288H265010 | Indicator | |
| 015B | 288H259010 | Bushing | |
| 016B | 288H270050 | Button, Copy/Low Filter/Spatial | |
| 017B | 288H154010 | Knob, Treble | |
| 018B | 288H154020 | Knob, Bass | |
| 019B | 012H154170 | Knob, Mic | |
| 020B | 288H303010 | Mask, Mic | |
| 021B | 471H270140 | Button, Volume | |
| 022B | 289H154120 | Knob, Balance | |
| 023B | 288H303020 | Mask, VCR/MON. Video/TV | |
| 024B | 288H303030 | Mask, Muting/Loudness | |
| 027B | 288H355010 | Lens, Memo/M1/M2 | |
| 032B | 288H051010 | Guide, Volume LED | |
| 033B | 288H051020 | Guide, Treble | |
| 034B | 288H051030 | Guide, Mic | |
| 037B | 288H160030 | Bracket, Video Terminal | |
| 038B | 51330308B0 | F.H. Tapped Screw | F3 x 8 |
| 039B | 51280308B0 | B.H. Tapped Screw | B3 x 8 |
| 040B | 51280308B0 | B.H. Tapped Screw | B3 x 8 |
| 041B | 51280308B0 | B.H. Tapped Screw | B3 x 8 |
| 042B | 2276005050 | Clamper | |
| 043B | 51100203A0 | B.H.M. Screw | B2 x 3 |
| 045B | 51280308B0 | B.H. Tapped Screw | B3 x 8 |
| 050B | 288H053010 | Cover, 3 Pin Jack | |



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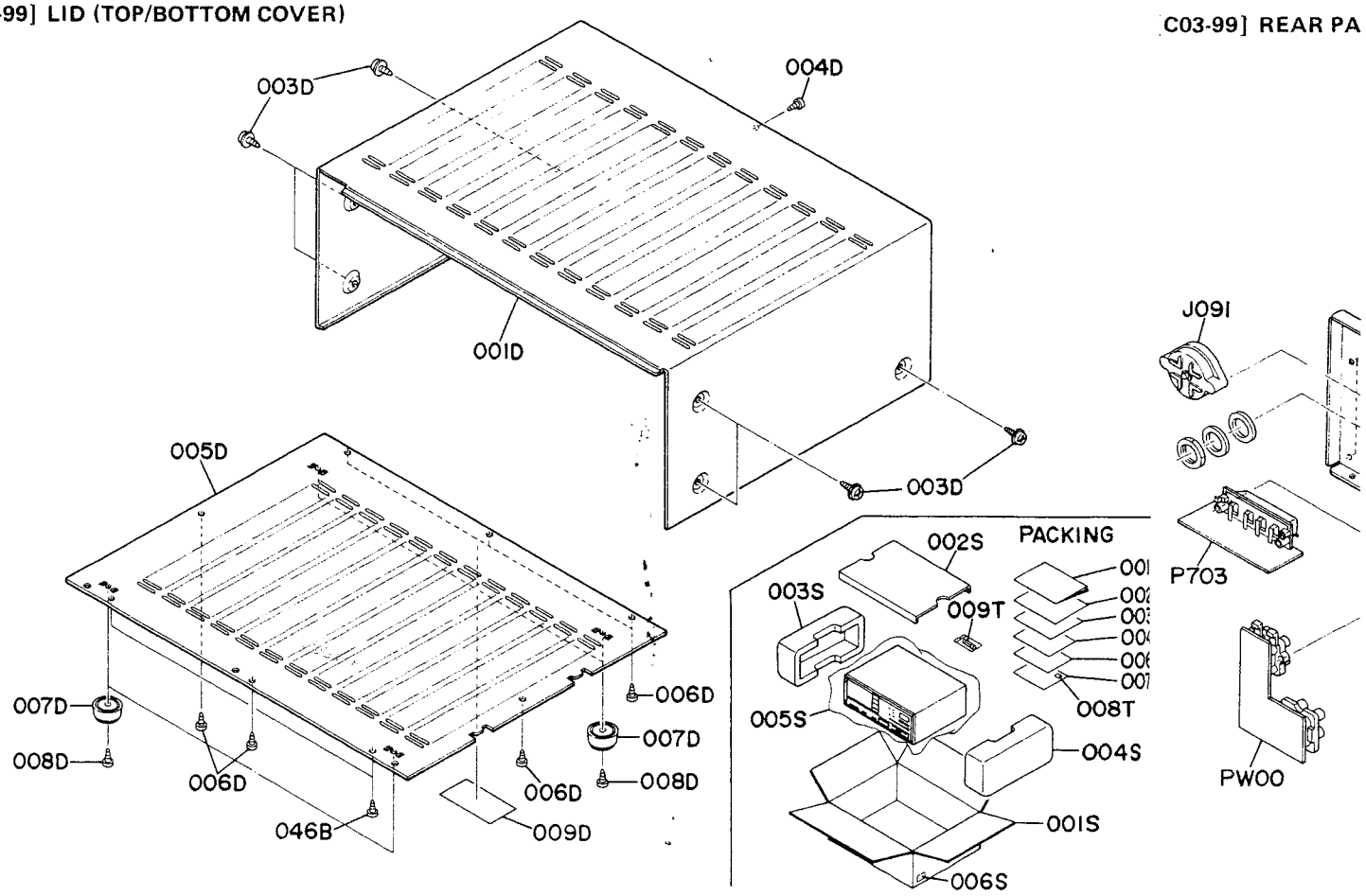
## [C02-99] LID (TOP/BOTTOM COVER)

## C03-99] REAR PA




| REF. DESIG. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| 046B | 5128030880 | B.H. Tapped Screw | B3 x 8 |
| 001D | 179T257010 | Lid, Top Cover | |
| 003D | 5126030800 | B.T. Screw | B3 x 8 |
| 004D | 5128030880 | B.H. Tapped Screw | B3 x 8 |
| 005D | 288H257020 | Lid, Bottom Cover | |
| 006D | 5128030880 | B.H. Tapped Screw | B3 x 8 |
| 007D | 011T057010 | Leg | |
| 008D | 5128040880 | B.H. Tapped Screw | B4 x 8 |
| 009D | 2911861110 | Label, Caution [N, E, A] | |
| | | **PACKING** | |
| 001S | 288H801010 | Packing Case (PM553), [N, A, F] | |
| | 288H801030 | Packing Case (PM553), [E] | |
| | 287H801010 | Packing Case (PM453), [N, A, F] | |
| | 287H801030 | Packing Case (PM453), [E] | |
| 002S | 288H807010 | Reinforcing [E] | |
| 003S | 179T809010 | Cushion, (L) | |
| 004S | 179T809020 | Cushion, (R) | |
| 005S | 9090808030 | Polyethylene Sheet | |

| REF. DESIG. | PART NO. | DESCRIPTION | EF. SIG. | PART NO. |
|---|---|---|---|---|
| 006S | 9526019060 | Serial No. Card [N, E] | 01E | 288H250030 |
| | 9526019030 | Serial No. Card [A] | | 288H250010 |
| | 9526019040 | Serial No. Card [F] | | 288H250040 |
| | | | | 288H250020 |
| 001T | 288H851310 | User Manual [N, E, A] | | 287H250010 |
| | 288H851110 | User Manual [F] | | 287H250040 |
| 002T | 288H851320 | User Manual, Spec [N, E, A] | | 287H250020 |
| 003T | 288H856010 | Circuit Diagram (PM553), [N, E] | 03E | 51280308B0 |
| | 287H856010 | Circuit Diagram (PM453), [N, E] | 04E | 51280308B0 |
| 004T | 9631000090 | Warranty Card [A] | 05E | 51280308B0 |
| | 9631000130 | Warranty Card [F] | | |
| 006T | 128T854010 | Warranty Card [F] | 06E | 51280308B0 |
| 007T | 9611000050 | User's Card [F] | 07E | 51280308B0 |
| 008T | 9540000010 | License | 08E | 51280308B0 |
| ⚠009T | FS10400800 | Fuse 4A 250V (PM553), | 09E | 51280308B0 |
| | FS10315800 | Fuse 3.15A 250V (PM453), | 11E | 1455259130 |
| | | | 2E | 2112265010 |
| | | | | 2112265110 |



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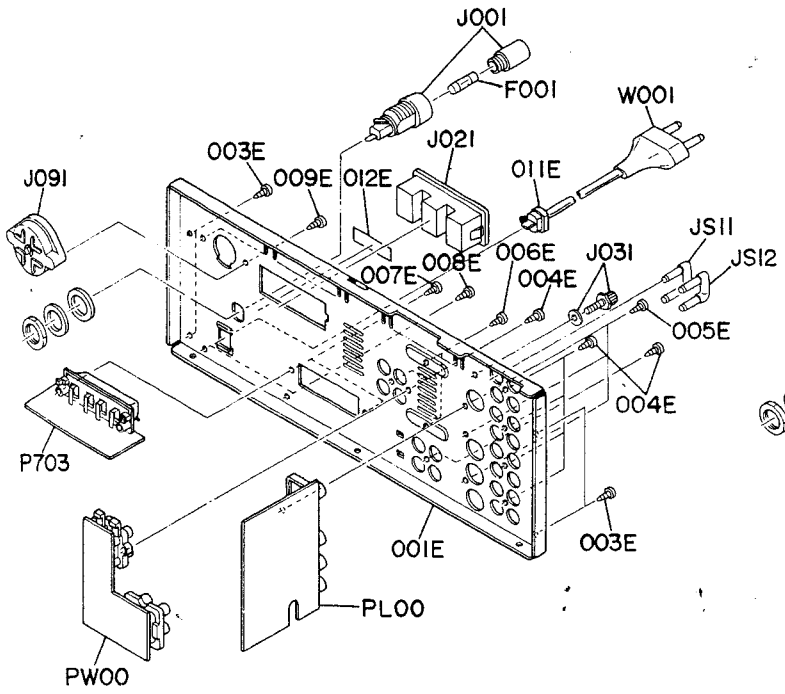
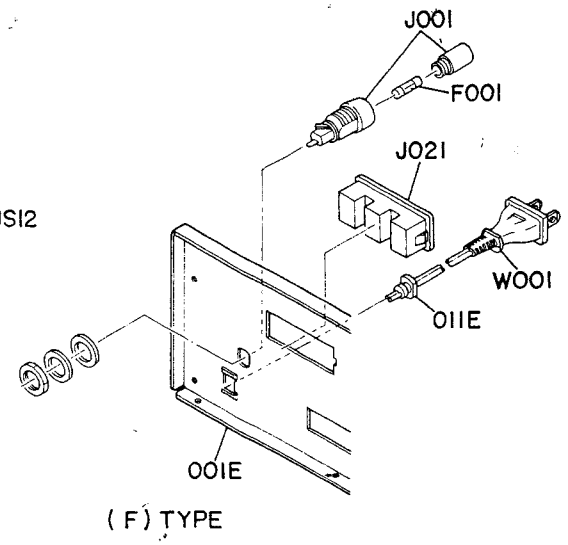
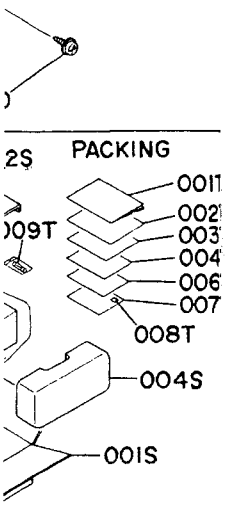
## [C03-99] REAR PANEL




| DESCRIPTION | REF. DESIG. | PART NO. | DESCRIPTION |
|---|---|---|---|
| ard [N, E] | 101E | 288H250030 | Rear Panel (PM553), [U] |
| ard [A] | | 288H250010 | Rear Panel (PM553), [N, A] |
| ard [F] | | 288H250040 | Rear Panel (PM553), [E] |
| | | 288H250020 | Rear Panel (PM553), [F] |
| l [N, E, A] | | 287H250010 | Rear Panel (PM453), [N, A] |
| l [F] | | 287H250040 | Rear Panel (PM453), [E] |
| l, Spec [N, E, A] | | 287H250020 | Rear Panel (PM453), [F] |
| gram (PM553), [N, E] | 103E | 51280308B0 | B.H. Tapped Screw B3 x 8 |
| gram (PM453), [N, E] | 104E | 51280308B0 | B.H. Tapped Screw B3 x 8 |
| ard [A] | 105E | 51280308B0 | B.H. Tapped Screw B3 x 8 |
| ard [F] | | | |
| ard [F] | 106E | 51280308B0 | B.H. Tapped Screw B3 x 8 |
| [F] | 107E | 51280308B0 | B.H. Tapped Screw B3 x 8 |
| | 108E | 51280308B0 | B.H. Tapped Screw B3 x 8 |
| 250V (PM553), [E | 109E | 51280308B0 | B.H. Tapped Screw B3 x 8 [N, E, A] |
| 5A 250V (PM453), [E | 111E | 1455259130 | Bushing, AC Power Cord |
| | 112E | 2112265010 | Indicator, Serial No. [F] |
| | | 2112265110 | Indicator, Serial No. [N, E, A] |

| REF. DESIG. | PART NO. | DESCRIPTION |
|---|---|---|
| ⚠ F001 | FS10200800 | Fuse T2.0A 250V (PM553), [N, E, A |
| | FS10400600 | Fuse 4A 250V (PM553), [F] |
| | FS10140800 | Fuse T1.4A 250V (PM453), [N, E, A |
| | FS10300600 | Fuse 3A 250V (PM453), [F] |
| ⚠ J001 | YJ08000300 | Jack, Fuse Holder [F] |
| | YJ08000290 | Jack, Fuse Holder [N, E, A] |
| ⚠ J021 | YJ04001180 | Jack, AC Outlet [E, F] |
| J031 | YL03010250 | Terminal, GND |
| ⚠ J091 | BY05030040 | Voltage Selector [N, A] |
| | BY05080050 | Voltage Selector [E] |
| JS11 | YQ01000080 | Shote Plug |
| JS12 | YQ01000080 | Shote Plug |
| ⚠ W001 | YC01800340 | A.C. Power Cord [N] |
| | YC01900080 | A.C. Power Cord [E, F] |
| | YC02000230 | A.C. Power Cord [A] |



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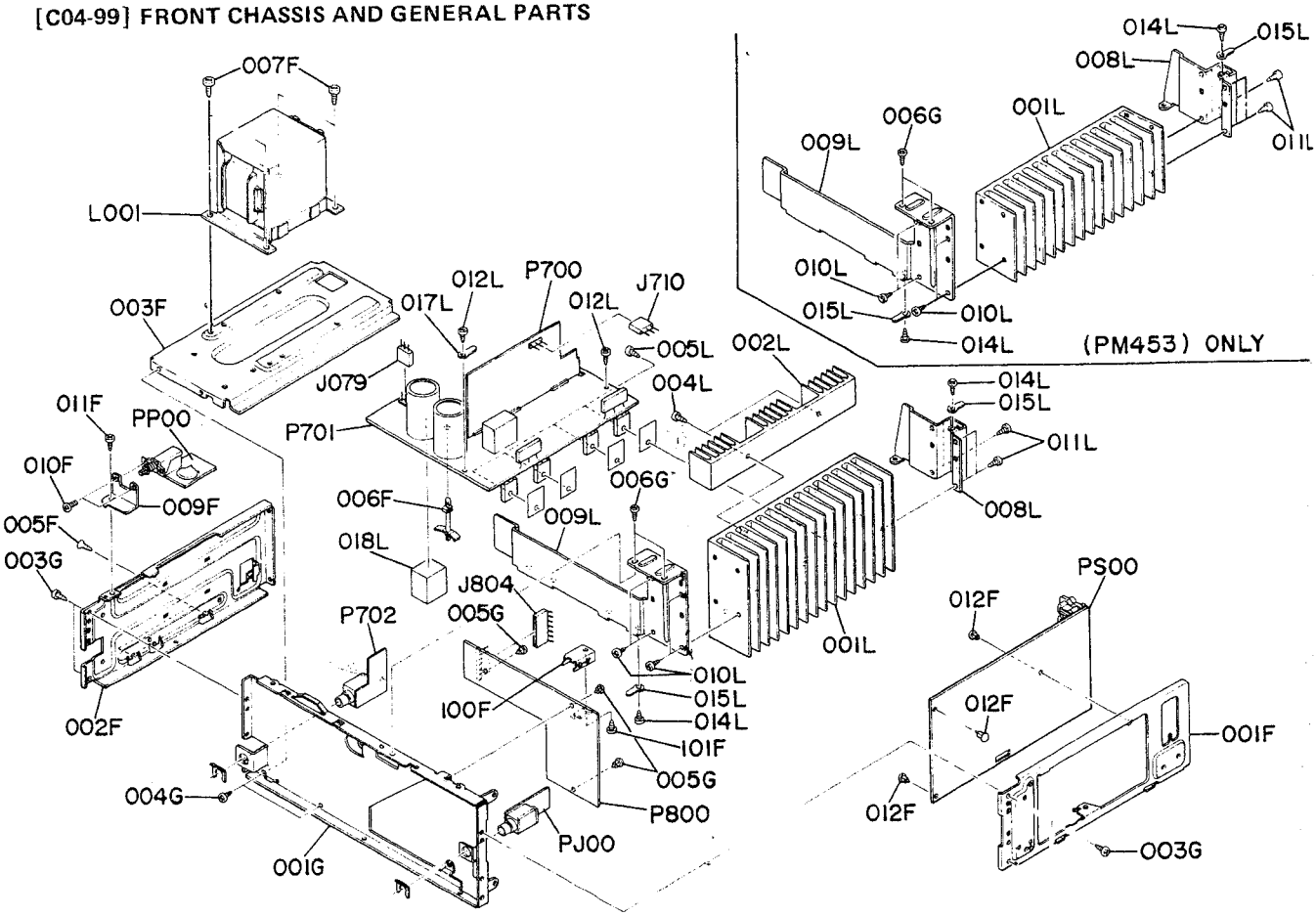
## [C04-99] FRONT CHASSIS AND GENERAL PARTS

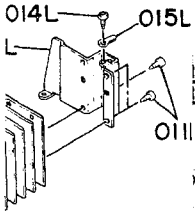



| REF. DESIG. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| 001F | 288H105020 | Chassis, Side; (R) | |
| 002F | 288H105030 | Chassis, Side; (L) | |
| 003F | 288H105040 | Chassis, Transformer | |
| 005F | 51280308B0 | B.H. Tapped Screw | B3 x 8 |
| 006F | 288H101020 | Support, Main Amp PWB | |
| 007F | 5128040880 | B.H. Tapped Screw | B4 x 8 |
| 009F | 288H160040 | Bracket, Power Switch | |
| 010F | 51100306A0 | B.H.M. Screw | B3 x 8 |
| 011F | 51280308B0 | B.H. Tapped Screw | B3 x 8 |
| 012F | 2276005030 | Clamper | |
| 100F | 250H267020 | Heatsink, (Q803) | |
| 101F | 51280308B0 | B.H. Tapped Screw | B3 x 8 |
| 001G | 288H105010 | Chassis, Front | |
| 003G | 51280308B0 | B.H. Tapped Screw | B3 x 8 |
| 004G | 51280308B0 | B.H. Tapped Screw | B3 x 8 |
| 005G | 2276005030 | Clamper | |
| 006G | 51280308B0 | B.H. Tapped Screw | B3 x 8 |

| REF. DESIG. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| 001L | 288H267010 | Heatsink, Main (PM553) | |
| | 288H267110 | Heatsink, Main (PM453) | |
| 002L | 288H267010 | Heatsink, Main (PM553) | |
| 004L | 51280308B0 | B.H. Tapped Screw | B3 x 8 (PM5 |
| 005L | 51280310B0 | B.H. Tapped Screw | B3 x 10 |
| 008L | 288H160010 | Bracket, Heatsink; Rear | |
| 009L | 288H160050 | Bracket, Heatsink; Front | |
| 010L | 51280308B0 | B.H. Tapped Screw | B3 x |
| 011L | 51280308B0 | B.H. Tapped Screw | B3 x |
| 012L | 51280308B0 | B.H. Tapped Screw | B3 x |
| 014L | 51280308B0 | B.H. Tapped Screw | B3 x |
| 015L | 62030039W0 | Lug | |
| 017L | 62030039W0 | Lug | |
| 018L | 288H056010 | Buffer | |
| J709 | YJ06001040 | Jack, 3P | |
| J710 | YJ06001040 | Jack, 3P | |
| J804 | YJ06001260 | Jack, 7P | |
| ⚠ L001 | TS19623030 | Power Transformer (PM553), [N,A | |
| | TS19623040 | Power Transformer (PM553), [F] | |
| | TS19623010 | Power Transformer (PM553), [F] | |
| | TS17631010 | Power Transformer (PM453), [N,A | |
| | TS17631030 | Power Transformer (PM453), [E] | |
| | TS17631020 | Power Transformer (PM453), [F] | |



M59




## ASSIGNMENT OF COMMON PARTS CODES.

RESISTOR

R***: (1) GD05 --- 140, Carbon film fixed resistor, ±5%, 1/4W
R***: (2) GD05 --- 160, Carbon film fixed resistor, ±5%, 1/6W

① — Resistance value

Examples

① Resistance value

| | | | |
|---|---|---|---|
| 0.1Ω...001 | 10Ω...100 | 1kΩ...102 | 100kΩ...104 |
| 0.5Ω...005 | 18Ω...180 | 2.7kΩ...272 | 680kΩ...684 |
| 1Ω...010 | 100Ω...101 | 10kΩ...103 | 1MkΩ...105 |
| 6.8Ω...068 | 390Ω...391 | 22kΩ...223 | 4.7MkΩ...475 |

M453) ONLY

(Note) Please distinguish 1/4W from 1/6W by the shape of parts used actually.

C***: CERAMIC CAP.

(1) DD1 ---- 370, Ceramic condenser
Disc type
①②
Temp. coeff. P350 ~ N1000, 50V
② — Capacity value
① — Tolerance

Examples

① Tolerance (Capacity deviation)
±0.25pF...0
±0.5pF...1
±5%...5

* Tolerance of COMMON PARTS handled here are as follows:
0.5pF ~ 5pF...±0.25pF
6pF ~ 10pF...±0.5pF
12pF ~ 560pF...±5%

② Capacity value

| | | |
|---|---|---|
| 0.5pF...005 | 3pF...030 | 100pF...101 |
| 1pF...010 | 10pF...100 | 220pF...221 |
| 1.5pF...015 | 47pF...470 | 560pF...561 |

C***: CERAMIC CAP.

(1) DK16 --- 300, High dielectric constant ceramic condenser
Disc type
①
Temp. chara. 2B4, 50V
② — Capacity value

Example

② Capacity value

| | | |
|---|---|---|
| 100pF...101 | 1000pF...102 | 10000pF...103 |
| 470pF...471 | 2200pF...222 | |

C***: ELECTROLY CAP. ( ⫩ ), FILM CAP. ( ⫫ )

(1) EA ------ 10, Electrolytic condenser
One-way lead type, Tolerance ±20%
①②
② — Dielectric strength
① — Capacity value

Examples

① Capacity value

| | | |
|---|---|---|
| 0.1μF...104 | 4.7μF...475 | 100μF...107 |
| 0.33μF...334 | 10μF...106 | 330μF...337 |
| 1μF...105 | 22μF...226 | 1100μF...108 |
| | | 2200μF...228 |

② Working voltage

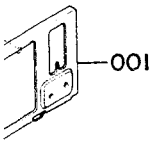
| | |
|---|---|
| 6.3V...006 | 25V...025 |
| 10V...010 | 35V...035 |
| 16V...016 | 50V...050 |

(2) DF15 --- 350, Plastic film condenser
One-way type, Mylar ±5% 50V
①
② — Capacity value

Examples

① Capacity value

| | |
|---|---|
| 0.001μF (1000pF)...102 | 0.1μF...104 |
| 0.0018μF.....182 | 0.56μF...564 |
| 0.01μF.....103 | 1μF...105 |
| 0.015μF.....153 | |




003G

SCRIPTION

(PM553)
(PM453)
(PM553)
crew B3 x 8 (PM5
crew B3 x 10
ink; Rear
ink; Front
crew B3 x
crew B3 x
crew B3 x
crew B3 x

ormer (PM553), [N, A]
ormer (PM553), [F]
ormer (PM553), [F]
ormer (PM453), [N, A]
ormer (PM453), [E]
ormer (PM453), [F]

# 8. ELECTRICAL PARTS LIST

•(N): for Europe
•(E): for Europe
•(A): for Australia
•(F): for Japan

| REF. DESIG. | PART NO. | DESCRIPTION |
|---|---|---|
| | | **P700-VOLTAGE AMP CIRCUIT BOARD** |
| P700 | YK288H1620 | P.W. Board, Voltage Amp |
| | ZZ288H8620 | P.W. Board Assembly (PM553) |
| | ZZ287H8620 | P.W. Board Assembly (PM453) |
| | | **P700-CAPACITOR** |
| CN07 | EA47606310 | Elect 47μF 63V |
| | | **P700-RESISTORS** |
| RK11 | GP05471050 | 470Ω ±5% 5W (PM553) |
| RK12 | GP05471050 | 470Ω ±5% 5W (PM553) |
| RN16 | GA05222010 | 2.2KΩ ±5% 1W (PM553) |
| | GA05182010 | 1.8KΩ ±5% 1W (PM453) |
| R744 | GA05822010 | 8.2KΩ ±5% 1W |
| | | **P700-SEMICONDUCTORS** |
| DK01 | HD20015210 | Diode 1SS133 (PM553) |
| DN01 | HD20022030 | Diode DSF10C |
| D707 | HD30012020 | Zener MA1150 |
| D708 | HD30024020 | Zener MA1082 |
| QK02 | HT322401A0 | Transistor 2SC2240(GR) (PM553) |
| QK03 | HT322401A0 | Transistor 2SC2240(GR) (PM553) |
| QK04 | HT322401A0 | Transistor 2SC2240(GR) (PM553) |
| QN01 | HC10042050 | IC TA7317P |
| QN02 | HT109701A0 | Transistor 2SA970(GR) |
| Q719 | HC10066020 | IC AN7062 |
| | | **P700-MISCELLANEOUS** |
| J701 | YP06001040 | Plug, 3P |
| J702 | YP07001580 | Plug, 8P |
| J703 | YP07001580 | Plug, 8P |
| J704 | YP07001580 | Plug, 8P |
| J710 | YJ06001040 | Jack, 3P |
| | | **P701-MAIN AMP CIRCUIT BOARD** |
| P701 | YK288H1610 | P.W. Board, Main Amp |
| | ZZ288H8610 | P.W. Board Assembly (PM553) |
| | ZZ287H8610 | P.W. Board Assembly (PM453) |
| | | **P701-CAPACITORS** |
| C721 | DD15101560 | Ceramic 100pF ±5% 500V |
| C722 | DD15101560 | Ceramic 100pF ±5% 500V |
| C723 | DD15101560 | Ceramic 100pF ±5% 500V |
| C724 | DD15101560 | Ceramic 100pF ±5% 500V |
| C729 | EA47606310 | Elect 47μF 63V |
| C732 | EA47606310 | Elect 47μF 63V |
| C861 | EB68806310 | Elect 6800μF 63V |
| C862 | EB68806310 | Elect 6800μF 63V |
| C863 | DK18103560 | Ceramic 0.01μF 500V |
| C864 | DK18103560 | Ceramic 0.01μF 500V |
| | | **P701-RESISTORS (All Resistors are ±5%)** |
| R721 | RA01020600 | 1KΩ, Trimming |
| R722 | RA01020600 | 1KΩ, Trimming |
| R725 | GG05680140 | 68Ω ¼W |
| R726 | GG05680140 | 68Ω ¼W |
| R727 | GG05101140 | 100Ω ¼W |
| R728 | GG05101140 | 100Ω ¼W |
| R731 | GG05471120 | 470Ω ½W |
| R732 | GG05471120 | 470Ω ½W |
| R733 | GG05068140 | 6.8Ω ¼W |
| R734 | GG05068140 | 6.8Ω ¼W |



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| REF. DESIG. | PART NO. | DESCRIPTION |
|---|---|---|
| R735 | GG05068140 | 6.8Ω ¼W |
| R736 | GG05068140 | 6.8Ω ¼W |
| ⚠ R737 | BW10000030 | 0.27Ω×2 ±10% 5W, Composite(PM553) |
| | BW10000040 | 0.27Ω×2 ±10% 3W, Composite(PM453) |
| ⚠ R738 | BW10000030 | 0.27Ω×2 ±10% 5W, Composite(PM553) |
| | BW10000040 | 0.27Ω×2 ±10% 3W, Composite(PM453) |
| R741 | GP05047030 | 4.7Ω 3W |
| R742 | GP05047030 | 4.7Ω 3W |
| ⚠ R743 | NH05740120 | 47Ω ½W, Fusible |
| R747 | GG05221140 | 220Ω ¼W |
| R748 | GG05221140 | 220Ω ¼W |
| R749 | GG05221140 | 220Ω ¼W |
| R750 | GG05221140 | 220Ω ¼W |
| R751 | GP10331030 | 330Ω ±10% 3W |
| R752 | GP10331030 | 330Ω ±10% 3W |
| ⚠ R753 | NH05470120 | 47Ω ½W, Fusible |
| | | **P701-SEMICONDUCTORS** |
| DN02 | HD20022030 | Diode DSF10C |
| DN03 | HD20015210 | Diode 1SS133 |
| DN04 | HD20015210 | Diode 1SS133 |
| D701 ≀ D706 | HD20015210 | Diode 1SS133 |
| ⚠ D861 | HE20009290 | Diode S5VB20 (PM553) |
| | HD20008290 | Diode S4VB20 (PM453) |
| QK01 | HW10004320 | Photo Unit PC827 |
| QN03 | HT322401A0 | Transistor 2SC2240(GR) |
| QN04 | HT322401A0 | Transistor 2SC2240(GR) |
| Q701 | HT112082A0 | Transistor 2SA1208(R, S) |
| Q702 | HT112082A0 | Transistor 2SA1208(R, S) |
| Q703 | HT329102A0 | Transistor 2SC2910(R, S) |
| Q704 | HT329102A0 | Transistor 2SC2910(R, S) |
| Q705 | HT309452B0 | Transistor 2SC945(P, Q) |
| Q706 | HT309452B0 | Transistor 2SC945(P, Q) |
| Q711 | HT332982D0 | Transistor 2SC3298(O, Y) |
| Q712 | HT332982D0 | Transistor 2SC3298(O, Y) |
| Q713 | HT113062D0 | Transistor 2SA1306(O, Y) |
| Q714 | HT113062D0 | Transistor 2SA1306(O, Y) |
| ⚠ Q715 | HT329872A0 | Transistor 2SC2987A(R, Q) (PM553) |
| | HT330122A0 | Transistor 2SC3012A(R, Q) (PM453) |
| ⚠ Q716 | HT329872A0 | Transistor 2SC2987A(R, Q) (PM553) |
| | HT330122A0 | Transistor 2SC3012A(R, Q) (PM453) |
| ⚠ Q717 | HT112272A0 | Transistor 2SA1227A(R, Q) (PM553) |
| | HT112322A0 | Transistor 2SA1232A(R, Q) (PM453) |
| ⚠ Q718 | HT112272A0 | Transistor 2SA1227A(R, Q) (PM553) |
| | HT112322A0 | Transistor 2SA1232A(R, Q) (PM453) |
| | | **P701-MISCELLANEOUS** |
| J706 | YP06001040 | Plug, 3P |
| J707 | YP06001040 | Plug, 3P |
| J708 | YP06000610 | Plug, 2P (PM553) |
| J709 | YJ06001040 | Jack, 3P |
| LN01 | LY20240190 | Relay, AP2U-24V (PM553) |
| | LY20240260 | Relay, DH2SU-24V (PM453) |
| | | **P702-HEADPHONE CIRCUIT BOARD** |
| P702 | YK288H1650 | P.W. Board, Headphone |
| | ZZ288H8650 | P.W. Board Assembly |
| J772 | YJ01002090 | Jack, Headphone |
| W701 | YU05200240 | Jumper Lead, 5P |
| W702 | YU02320240 | Jumper Lead, 3P |

| REF. DESIG. | PART NO. | DESCRIPTION |
|---|---|---|
| | | **P703-SPEAKER TERMINAL CIRCUIT BOARD** |
| P703 | YK288H1640 | P.W. Board, Speaker Terminal |
| | ZZ288H8640 | P.W. Board Assembly |
| R761 | GG05022120 | Resistor 22Ω ±5% ½W |
| R762 | GG05022120 | Resistor 22Ω ±5% ½W |
| J761 | YT03040230 | Terminal, 4P |
| L761 | LL23905120 | Coil |
| L762 | LL23905120 | Coil |
| W703 | YU02220240 | Jumper Lead, 2P |
| | | **P800-POWER SUPPLY CIRCUIT BOARD** |
| P800 | YK288H2630 | P.W. Board, Power Supply |
| | ZZ288H2630 | P.W. Board Assembly |
| | | **P800-CAPACITORS** |
| C801 | DK18223310 | Ceramic 0.022μF 50V |
| C809 | DK18223310 | Ceramic 0.022μF 50V |
| C813 | DK18223310 | Ceramic 0.022μF 50V |
| C814 | DK18223310 | Ceramic 0.022μF 50V |
| | | **P800-RESISTORS** |
| ⚠ R801 | NH05100120 | 10Ω ±5% ½W, Fusible |
| R802 | GG05471140 | 470Ω ±5% ¼W |
| R803 | GA05151010 | 150Ω ±5% 1W |
| ⚠ R804 | NH05100120 | 10Ω ±5% ½W, Fusible |
| R805 | GG05471140 | 470Ω ±5% ¼W |
| ⚠ R806 | NH05022120 | 2.2Ω ±5% ½W, Fusible |
| R807 | GG05331140 | 330Ω ±5% ¼W |
| ⚠ R859 | NH05100140 | 10Ω ±5% ¼W, Fusible |
| | | **P800-SEMICONDUCTORS** |
| ⚠ D801 | HD20022030 | Diode DSF10C |
| ⚠ D802 | HD20022030 | Diode DSF10C |
| ⚠ D803 | HD20022030 | Diode DSF10C |
| ⚠ D804 | HD20022030 | Diode DSF10C |
| D805 | HD30020020 | Zener MA1160 |
| D806 | HD30005020 | Zener MA1056 |
| D807 | HD30020020 | Zener MA1160 |
| ⚠ D808 | HD20022030 | Diode DSF10C |
| ⚠ D809 | HD20022030 | Diode DSF10C |
| ⚠ D810 | HD20022030 | Diode DSF10C |
| ⚠ D811 | HD20022030 | Diode DSF10C |
| D812 | HD30007020 | Zener MA1091 |
| D813 | HD20015210 | Diode 1SS133 |
| D814 | HD20015210 | Diode 1SS133 |
| D816 | HD20015210 | Diode 1SS133 |
| D851 | HD20022030 | Diode DSF10C |
| ⚠ Q801 | HT332982D0 | Transistor 2SC3298(O, Y) |
| ⚠ Q802 | HT113062D0 | Transistor 2SA1306(O, Y) |
| ⚠ Q803 | HT332982D0 | Transistor 2SC3298(O, Y) |
| Q851 | HT30001000 | Transistor 2SC536SP(F, G), etc |
| ⚠ Q852 | HT30001000 | Transistor 2SC536SP(F, G), etc |
| Q853 | HT30001000 | Transistor 2SC536SP(F, G), etc |
| | | **P800-MISCELLANEOUS** |
| J801 | YP06001060 | Plug, 7P |
| J802 | YJ06002460 | Jack, 7P |
| J803 | YJ06002430 | Jack, 3P |
| J804 | YJ06001260 | Jack, 7P |

| REF. DESIG. | |
|---|---|
| PJ00 | |
| JJ01 | |
| JJ03 | |
| PL00 | Y Z Z |
| CL07 | D |
| CL08 | D |
| RL29 | G |
| RL30 | G |
| DL01 | HI |
| DL02 | HI |
| DL03 | HI |
| QL01 | HC |
| QL02 | |
| ≀ QL07 | HT |
| QL08 | |
| ≀ QL11 | HT |
| JL01 | YT |
| | YT |
| JL02 | YJC |
| JL03 | YJC |
| JL04 | YPC |
| WL01 | YUC |
| PP00 | YK2 ZZ2 ZZ2 |
| ⚠ CP01 | DK1 |
| JP01 | YP0E |
| JP02 | YP0E |
| ⚠ SP01 | SP01 |



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| REF. DESIG. | PART NO. | DESCRIPTION |
|---|---|---|
| | | **PJ00-MIC JACK CIRCUIT BOARD** |
| PJ00 | YK288H2660 | P.W. Bord, Mic Jack |
| | ZZ288H2660 | P.W. Board Assembly |
| JJ01 | YJ01002110 | Jack, Mic |
| JJ03 | YJ07001720 | Jack, 2P |
| | | **PL00-VIDEO SELECTOR CIRCUIT BOARD** |
| PL00 | YK288H1630 | P.W. Board, Video Selector |
| | ZZ288H8630 | P.W. Board Assembly [N, A] |
| | ZZ288H7630 | P.W. Board Assembly [E, F] |
| | | **PL00-CAPACITORS** |
| CL07 | DK18103310 | Ceramic 0.01μF 50V |
| CL08 | DK18173310 | Ceramic 0.01μF 50V |
| | | **PL00-RESISTORS** |
| RL29 | GA05221010 | 220Ω ±5% 1W |
| RL30 | GA05221010 | 220Ω ±5% 1W |
| | | **PL00-SEMICONDUCTORS** |
| DL01 | HD30004020 | Zener MA1051A |
| DL02 | HD30004020 | Zener MA1051A |
| DL03 | HD20015210 | Diode 1SS133 |
| QL01 | HC406603C0 | IC LC4066BH |
| QL02 ~ QL07 | HT327852D0 | Transistor 2SC2785(FF, EF) |
| QL08 ~ QL11 | HT111752D0 | Transistor 2SA1175(FF, EF) |
| | | **PL00-MISCELLANEOUS** |
| JL01 | YT01040340 | Terminal, 4P; AV [N, A] |
| | YT01040560 | Terminal, 4P; AV [E, F] |
| JL02 | YJ07001730 | Jack, 3P |
| JL03 | YJ07001730 | Jack, 3P |
| JL04 | YP06000610 | Plug, 2P |
| WL01 | YU03150260 | Jumper Lead, 3P |
| | | **PP00-POWER SWITCH CIRCUIT BOARD** |
| PP00 | YK288H1660 | P.W. Board, Power Switch |
| | ZZ288H8660 | P.W. Board Assembly [N, A] |
| | ZZ288H7660 | P.W. Board Assembly [E] |
| ⚠CP01 | DK18103840 | Ceramic Cap. 0.01μF |
| JP01 | YP06003400 | Plug, 2P |
| JP02 | YP06003400 | Plug, 2P [N, A] |
| ⚠SP01 | SP01010960 | Push Switch, Power |

| REF. DESIG. | PART NO. | DESCRIPTION |
|---|---|---|
| | | **PS00-PHONO SELECTOR SURRO CIRCUIT BOARD** |
| PS00 | YK288H2620 | P.W. Board, Phono Selector Surrou |
| | ZZ288H2620 | P.W. Board Assembly |
| | | **PS00-CAPACITORS** |
| CS19 ~ CS24 | DK18103310 | Ceramic 0.01μF +80% −20% |
| | | **PS00-RESISTORS** |
| RS56 | GG05181140 | 180Ω ±5% ¼W |
| RS57 | GG05181140 | 180Ω ±5% ¼W |
| RS58 | GG05470140 | 47Ω ±5% ¼W |
| RS59 | GG05470140 | 47Ω ±5% ¼W |
| R415 | GG05181140 | 180Ω ±5% ¼W |
| R416 | GG05181140 | 180Ω ±5% ¼W |
| | | **PS00-SEMICONDUCTOR** |
| QG01 | HT327852D0 | Transistor 2SC2785(FF, EF) |
| QG02 | HT327852D0 | Transistor 2SC2785(FF, EF) |
| QS01 | HC10117050 | IC TC9163N |
| QS02 | HC10150030 | IC LC4966 |
| QS03 | HC10116050 | IC TC9177P |
| QS05 | HC10150030 | IC LC4966 |
| QS06 | HC10150030 | IC LC4966 |
| QS07 | HC10008090 | IC NJM4558DD |
| QS08 | HT10001000 | Transistor 2SA608SP(F, G), etc. |
| QS09 | HT10001000 | Transistor 2SA608SP(F, G), etc. |
| QS10 | HT30001000 | Transistor 2SC536SP(F, G), etc. |
| QS71 | HC10008090 | IC NJM4558DD |
| Q401 | HC10008090 | IC NJM4558DD |
| | | **PS00-MISCELLANEOUS** |
| JS01 | YT02040500 | Terminal, 4P; RCA |
| JS02 | YT02040500 | Terminal, 4P; RCA |
| JS03 | YT02040500 | Terminal, 4P, RCA |
| JS04 | YT02040500 | Terminal, 4P; RCA |
| JS05 | YJ06002440 | Jack, 4P |
| JS06 | YJ06002450 | Jack, 6P |
| JS07 | YJ06002430 | Jack, 3P |
| JS08 | YJ06002430 | Jack, 3P |
| JS09 | YJ06002430 | Jack, 3P |
| JS10 | YJ06002450 | Jack, 6P |
| JS11 | YQ01000080 | Shote Plug |
| JS12 | YQ01000080 | Shote Plug |
| JS13 | YJ06002430 | Jack, 3P |
| JS14 | YJ06002430 | Jack, 3P |
| JS15 | YJ06002430 | Jack, 3P |
| JS16 | YJ06002430 | Jack, 3P |
| JS17 | YJ06002430 | Jack, 3P |
| WS01 | YU03060260 | Jumper Lead, 3P |
| WU07 | YU03120260 | Jumper Lead, 3P |
| | | **PU00-MICON/TONE/MIC AMP CIRCUIT BOARD** |
| PU00 | YK288H2610 | P.W. Board, Micon/Tone/Mic Amp |
| | ZZ288H2610 | P.W. Board Assembly |
| | | **PU00-CAPACITORS** |
| CE03 | DD15470300 | Ceramic 47pF ±5% |
| CE04 | DD15470300 | Ceramic 47pF ±5% |

| REF. DESIG. | PART NO. | DESCRIPTION |
|---|---|---|
| | | **PU00-RESISTORS** |
| RE13 | RS01040340 | 100KΩ(C), Variable; Tone Volume(L) |
| RE14 | RS01040340 | 100KΩ(C), Variable; Tone Volume(R) |
| RE31 | GG05101140 | 100Ω ±5% ¼W |
| RE32 | GG05101140 | 100Ω ±5% ¼W |
| RF08 | RS01040200 | 100KΩ, Variable; Mic Mix |
| | | **PU00-SEMICONDUCTORS** |
| DE01 ~ DE07 | HD20015210 | Diode 1SS133 |
| DU01 ~ DU21 | HD20015210 | Diode 1SS133 |
| DU22 ~ DU25 | HI10053320 | L.E.D. GL-3NG1 |
| DU26 ~ DU36 | HI10034320 | L.E.D. GL-9EG14; Green |
| DU40 | HI10037030 | L.E.D. SLP-981C; Red |
| DU41 | HI10037030 | L.E.D. SLP-981C; Red |
| DU42 | HD20015210 | Diode 1SS133 |
| DU43 | HI10038030 | L.E.D. SLP-281F; Green |
| DU44 | HI10038030 | L.E.D. SLP-281F; Green |
| DU45 | HI10038030 | L.E.D. SLP-281F; Green |
| DU46 | HI10039030 | L.E.D. SLP-281F; Green |
| QE01 | HC10008090 | IC NJM4558DD |
| QE02 | HF203722A0 | F.E.T. 2SK372(GR, BL) |
| QE03 | HF203722A0 | F.E.T. 2SK372(GR, BL) |
| QE04 | HT111752D0 | Transistor 2SA1175(FF, EF) |
| QE05 | HT327852D0 | Transistor 2SC2785(FF, EF) |
| QE06 | HT111752D0 | Transistor 2SA1175(FF, EF) |
| QF01 | HC10008090 | IC NJM4558DD |
| QU01 | HC10169030 | IC LM6502C |
| QU02 | HC40110B0 | IC 4011 |
| QU03 | HC10001260 | IC MSM59371RS |
| QU04 ~ QU25 | HT327852D0 | Transistor 2SC2785(FF, EF) |
| | | **PU00-MISCELLANEOUS** |
| JU08 | ZP01030010 | Wire Holder, 3P |
| SE01 ~ SE04 | SP02020670 | Push Switch, SPH-1 |
| SU01 | SP01010970 | Push Switch, Tact |
| SU02 | SP01010970 | Push Switch, Tact |
| SU03 | SP01010970 | Push Switch, Tact |
| SU04 | SP01010980 | Push Switch, Tact |
| SU05 | SP01010970 | Push Switch, Tact |
| SU06 | SP01010970 | Push Switch, Tact |
| SU07 | SP01010970 | Push Switch, Tact |

| REF. DESIG. | PART NO. | DESCRIPTION |
|---|---|---|
| SU08 | SP01010970 | Push Switch, Tact |
| SU09 | SP01010990 | Push Switch, Tact |
| SU10 | SP01010970 | Push Switch, Tact |
| SU11 | SP01010970 | Push Switch, Tact |
| SU12 | SP01010970 | Push Switch, Tact |
| SU13 | SP01010990 | Push Switch, Tact |
| SU14 | SP01010970 | Push Switch, Tact |
| SU15 | SP01010970 | Push Switch, Tact |
| SU16 | SP01010970 | Push Switch, Tact |
| SU17 | SP01010970 | Push Switch, Tact |
| WU01 | YU07340260 | Jumper Lead, 7P |
| WU02 | YU06120260 | Jumper Lead, 6P |
| WU03 | YU03120260 | Jumper Lead, 3P |
| WU04 | YU05300260 | Jumper Lead, 5P |
| WU05 | YU03400260 | Jumper Lead, 3P |
| WU06 | YU02100260 | Jumper Lead, 2P |
| WU09 | YU03100260 | Jumper Lead, 3P |
| WU10 | YU03200260 | Jumper Lead, 3P |
| WU11 | YU03220260 | Jumper Lead, 3P |
| WU12 | YU04220260 | Jumper Lead, 4P |
| WU13 | YU03100260 | Jumper Lead, 3P |
| XU01 | FQ04003010 | Seramic Vibrator, CSB-400P |
| | | **PV00-FRONT AV TERMINAL CIRCUIT BOARD** |
| PV00 | YK288H2650 | P.W. Board, Front AV Terminal |
| | ZZ288H2650 | P.W. Board Assembly |
| JV01 | YT02030020 | Terminal, 3P; RCA |
| WV01 | YU03200260 | Jumper Lead, 3P |
| | | **PW00-REMOTE/EASY/VCR TERMINAL CIRCUIT BOARD** |
| PW00 | YK288H2640 | P.W. Board, Remote/Easy/VCR Terminal |
| | ZZ288H2640 | P.W. Board Assembly |
| CW01 | DK18103310 | Ceramic Cap. 0.01μF +80% −20% |
| CW02 | DK18223310 | Ceramic Cap. 0.022μF +80% −20% |
| CW03 | DK18223310 | Ceramic Cap. 0.022μF +80% −20% |
| JW01 | YT02040600 | Terminal, 4P; VCR IN/OUT |
| JW02 | YT02020340 | Terminal, 2P; Remote |
| JW03 | YT02020350 | Terminal, 2P; Easy |
| SW01 | SS01020520 | Slide Switch, Mono/Stereo |
| SW02 | SS01020520 | Slide Switch, Exit/Int |
| WW01 | YU06120260 | Jumper Lead, 6P |

| | |
|---|---|
| (W01-99) | Assembly and Wiring |
| (T01-99) | Adjustment |
| (X01-00) | Correction |

**NOTE ON SAFETY:**
**Symbol ⚠ Fire or electrical shock hazard. Only original parts should be used to replace any part marked with symbol ⚠. Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.**



M595

**9. TECHN**

**AUDIO SECT**
**POWER OUT**
**DIN 4 OH**
**RMS 4 OH**
**DIN 8 OH**
**RMS 8 OH**
**TOTAL HAR**
**I.M. DISTOR**
**DAMPING F**

**MM CARTR**
Frequency R
Signal to Noi
Input Impeda
Input Capaci
Input Sensiti
Equivalent In
Dynamic Rar

**MIC. INPUT**
Input Impeda
Input Sensiti

**AUX. INPUT**
Input Impeda
Input Sensiti
Frequency R
Signal to Noi

**OUTPUT VO**
Tape Out . .

**OUTPUT IMP**
Tape Out . .

**GENERAL**
Power Requir

Power Consur
Dimensions
Panel Widt
Panel Heigh
Depth . . .
Weight
Unit Alone

## 9. TECHNICAL SPECIFICATIONS

(Model PM553)

### AUDIO SECTION

| | |
|---|---|
| POWER OUTPUT PER CHANNEL | 85 W |
| DIN 4 OHMS | 70 W |
| RMS 4 OHMS | 80 W |
| DIN 8 OHMS | 70 W |
| RMS 8 OHMS | 0.05% |
| TOTAL HARMONIC DISTORTION AT RMS 8 OHMS | 0.05% |
| I.M. DISTORTION | 35 |
| DAMPING FACTOR 8 OHMS (1 kHz) | |

### MM CARTRIDGE INPUT

| | |
|---|---|
| Frequency Response (RIAA) | ±0.5 dB |
| Signal to Noise Ratio | 80 dB |
| Input Impedance | 47 k ohms |
| Input Capacitance | 330 pF |
| Input Sensitivity | 2.5 mV |
| Equivalent Input Noise | 1.6 μV |
| Dynamic Range | 103 dB |

### MIC. INPUT

| | |
|---|---|
| Input Impedance | 12 k ohms |
| Input Sensitivity | 2.5 mV |

### AUX. INPUT

| | |
|---|---|
| Input Impedance | 22 k ohms |
| Input Sensitivity | 150 mV |
| Frequency Response | 10 Hz ~ 25 kHz |
| Signal to Noise Ratio | 95 dB |

### OUTPUT VOLTAGE

| | |
|---|---|
| Tape Out | 150 mV |

### OUTPUT IMPEDANCE

| | |
|---|---|
| Tape Out | 550 ohms |

### GENERAL

| | | |
|---|---|---|
| Power Requirements | N and T versions | 220/240 V AC, 50/60 Hz |
| | E version | 110/120/220/240 V AC, 50/60 Hz |
| Power Consumption at Rated Output, both Channels Operating | | 290 W |
| Dimensions | | |
| Panel Width | | 320 mm |
| Panel Height | | 125 mm |
| Depth | | 260 mm |
| Weight | | |
| Unit Alone | | 7.9 kg |

Specifications and appearance are subject to change for modification without notice.



M596

(Model PM453)

## AUDIO SECTION

### POWER OUTPUT PER CHANNEL

| | |
|---|---|
| DIN 4 OHMS | 65 W |
| RMS 4 OHMS | 50 W |
| DIN 8 OHMS | 60 W |
| RMS 8 OHMS | 50 W |
| TOTAL HARMONIC DISTORTION AT RMS 8 OHMS | 0.05% |
| I.M. DISTORTION | 0.05% |
| DAMPING FACTOR 8 OHMS (1 kHz) | 35 |

### MM CARTRIDGE INPUT

| | |
|---|---|
| Frequency Response (RIAA) | ±0.5 dB |
| Signal to Noise Ratio | 80 dB |
| Input Impedance | 47 k ohms |
| Input Capacitance | 330 pF |
| Input Sensitivity | 2.5 mV |
| Equivalent Input Noise | 1.6 μV |
| Dynamic Range | 103 dB |

### MIC. INPUT

| | |
|---|---|
| Input Impedance | 12 k ohms |
| Input Sensitivity | 2.5 mV |

### AUX. INPUT

| | |
|---|---|
| Input Impedance | 22 k ohms |
| Input Sensitivity | 150 mV |
| Frequency Response | 10 Hz ~ 25 kHz |
| Signal to Noise Ratio | 95 dB |

### OUTPUT VOLTAGE

| | |
|---|---|
| Tape Out | 150 mV |

### OUTPUT IMPEDANCE

| | |
|---|---|
| Tape Out | 550 ohms |

### GENERAL

| | | |
|---|---|---|
| Power Requirements | N and T versions | 220/240 V AC, 50/60 Hz |
| | E version | 110/120/220/240 V AC, 50/60 Hz |
| Power Consumption at Rated Output, both Channels Operating | | 230 W |
| Dimensions | | |
| Panel Width | | 320 mm |
| Panel Height | | 125 mm |
| Depth | | 260 mm |
| Weight | | |
| Unit Alone | | 7.1 kg |

Specifications and appearance are subject to change for modification without notice.



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## MARANTZ DESIGN AND SERVICE

Using superior design and selected high grade components, MARANTZ company has created the ultimate in stereo sound.
Only **original MARANTZ parts** can insure that your MARANTZ product will continue to perform to the specifications for which it is famous.

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The following information must be supplied to eliminate delays in processing your order:
. Complete address
. Complete part numbers and quanties required
. Description of parts
. Model number for which part is required
. Way of shipment
. Signature: any order form or telex must be signed otherwise such part order will be considered as null and void.

### TECHNICAL ASSISTANCE

Should you require any other technical support, do not hesitate to contact the Technical Department of
MARANTZ EUROPE & Co.
Avenue Louise 326 - Bte. 32
B-1050 Brussels
Belgium
Telephone: (02) 6407830 (10 l)
Telex: 26602
Fax.: (02) 649.29.20

### PARTS ORDERING

Parts may be ordered at the following addresses:

**AUSTRIA**
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Vertriebsgesellschaft GmbH
Wienerbergstrasse 1
A 1101 Wien
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Telex: 132.332

**AUSTRALIA**
MARANTZ AUSTRALIA
PTY., Ltd.
9 Chard Road
Brookvale, NSW 2100
Australia
Telex: 24121

**BELGIUM**
VD DIVISION MARANTZ
Industrialaan 1
1720 Groot-Bijgaarden
Belgium
Telex: 24466

**CHILE**
MARANTZ
DIVISION OF PHILIPS S.A.
Av. Santa Maria, 0760
Casilla 2687
Santiago
Telex: 240.239

**DENMARK**
MARANTZ
DIVISION OF PHILIPS
SERVICE A/S
Tagas Boulevard 80
Postbox 1919
DK-2300 København S
Danmark
Telex: 31201

**EIRE**
MARANTZ IRELAND Ltd.
Newstead
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Dublin 4
Telex: 25200

**FINLAND**
MARANTZ
DIVISION OF OY PHILIPS Ab
Kaivokatu 8
00100 Helsinki
Finland
Telex: 124811

**FRANCE**
MARANTZ FRANCE
4 Rue Bernard Palissy
92600 Asnières
France
Telex: 611651

**GERMANY**
MARANTZ GERMANY GmbH
Max-Planck-Strasse 22
6072 Dreieich 1
Germany
Telex: 529821

**THE NETHERLANDS**
MARANTZ
De Limiet 3
4131 NR Vianen
The Netherlands
Telex: 47679

**NORWAY**
MARANTZ
DIVISION OF PHILIPS A/S
Sandstuveien 40
Oslo 6
Norway
Telex: 72640

**GREAT BRITAIN**
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Saxon Way Industrial Estate
Moor Lane
Harmondsworth UB7 OLW
Great Britain
Telex: 935196

**GREECE**
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P.O.Box 21025
Hippocratus Street 188
Athens 11410
Greece
Telex: 216.795

**ITALY**
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20121 Milano
Italia

**JAPAN**
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35-1, 7-chome, Sagamiono
Sagamihara-shi, Kanagawa
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AL ALAMIAH ELECTRONICS
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P.O.Box 23781
Safat-Kuwait
Telex: 22694

**SAUDI ARABIA**
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University Street
Riyadh 11432
Saudi Arabia
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**SOUTH AFRICA**
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Rainer House
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Johannesburg
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**SPAIN**
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Badalona (Barcelona)
Spain
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**SWEDEN**
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S-115 84 Stockholm
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Telex: 14060

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Route de Villars 105
1701 Fribourg
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6 Blok N°6310
Unkapani
Istanbul
Turkey
Telex: 22085

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CACHIA & GALEA
Republic Street, 68D
Valetta
Telex: 1682

**U.S.A.**
MARANTZ COMPANY, Inc.
National Service Departmer
P.O.Box 577
Chatsworth, CA 91311
U.S.A.

**All of the above locations are fully equipped to take care of your total service needs. Because various countries have differing configuration requirements, it is necessary that you contact the service facility in your particular country. In the event that there is no service location listed for your country, please, contact the nearest facility for the necessary assistance.**

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